DIGITAL PROJECTION

USER MANUAL

INSTALLATION AND QUICK-START GUIDE
CONNECTION GUIDE
OPERATING GUIDE
REMOTE COMMUNICATIONS GUIDE

E-Vision 8000 Series

High Brightness Digital Video Projector

Rev F July 2014

112-796F

About This Document

Please follow the instructions in this manual carefully to ensure safe and long-lasting use of the projector.

Keep this manual handy for future reference.

Symbols used in this manual

Many pages in this document have a dedicated area for notes. The information in that area is accompanied by the following symbols:

ELECTRICAL WARNING: this symbol indicates that there is a danger of electrical shock unless the instructions are closely followed.

WARNING: this symbol indicates that there is a danger of physical injury to yourself and/or damage to the equipment unless the instructions are closely followed.

NOTE: this symbol indicates that there is some important information that you should read.

Product revision

Because we at Digital Projection continually strive to improve our products, we may change specifications and designs, and add new features without prior notice.

Legal notice

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Notes

Introduction

Congratulations on your purchase of this Digital Projection product.

Your projector has the following key features:

- Swappable color wheels for high brightness and color critical applications.
- 3GSDI with loop-through.
- Cornerstone, Vertical & Horizontal Keystone, Pincushion & Barrel, and Image Rotation.
- Blanking control for custom input window sizing.
- Edge Blending with Black Level Uplift in blend region and correction for non-active pixels at the edge of the display.
- Two sources can be displayed either one within the other (PIP), or side by side with original aspect ratios maintained.
- Motorized and programmable shift, zoom and focus. Intelligent Lens Memory with 10 user-definable preset positions.
- Control via LAN and RS232.

A serial number is located on the back of the projector. Please record it here:

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INSTALLATION AND QUICK-START GUIDE

E-Vision 8000 Series

High Brightness Digital Video Projector

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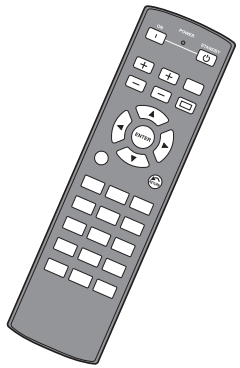
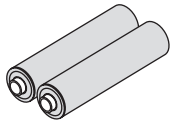
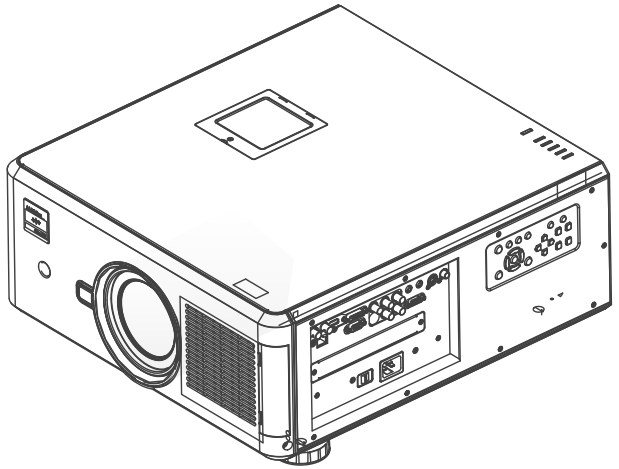
What's In The Box?



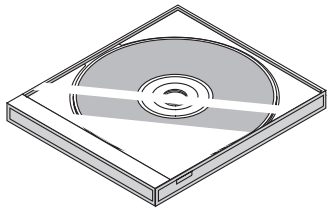
Remote control (112-532)



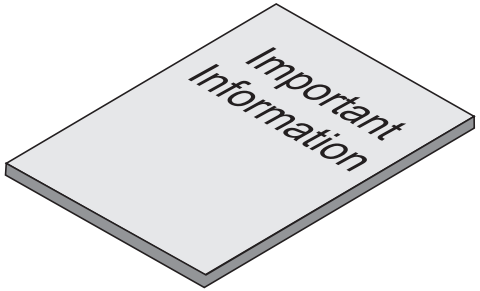
2x AA batteries



Projector

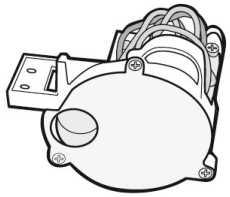


User Manual on disc (115-759)

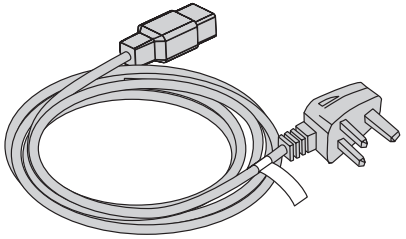


Important Information (112-797)

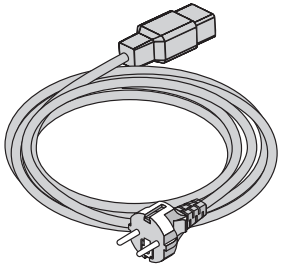
Lens cap



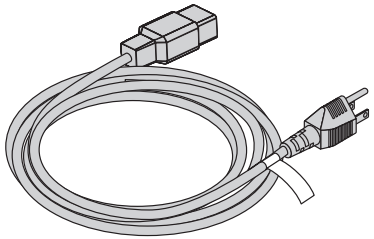
RGBCMY color wheel



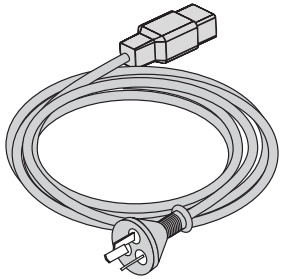
Power cable, United Kingdom (112-814)



Power cable, Europe (112-816)



Power cable, North America (112-815)



Power cable, China (112-817)

Notes

Make sure your box contains everything listed. If any pieces are missing, contact your dealer.

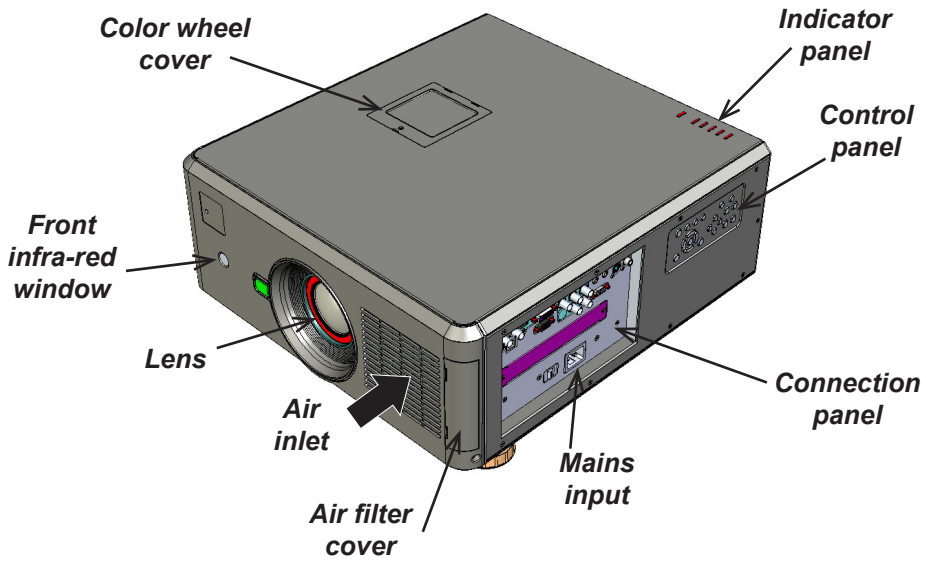
You should save the original box and packing materials, in case you ever need to ship your projector.

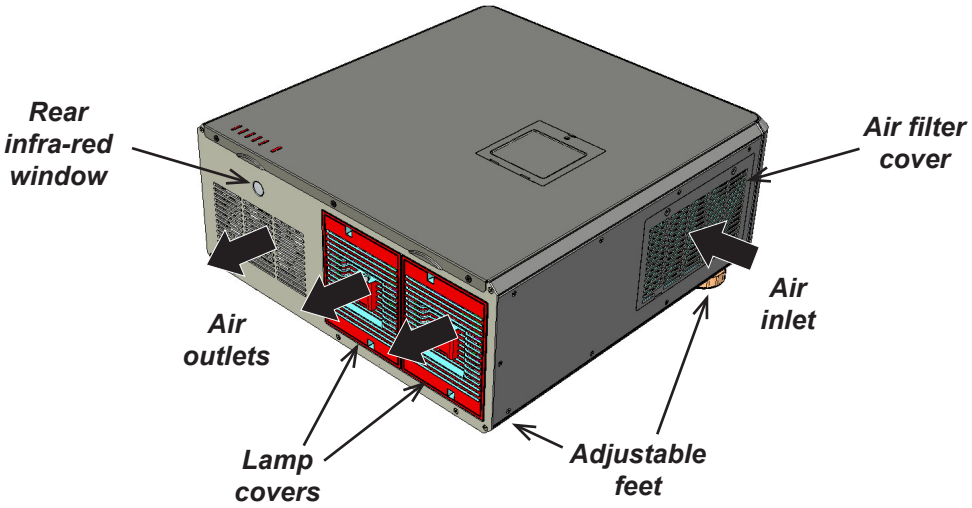
An RYGCWB color wheel, optimized for brightness, is fitted as standard. Use the RGBCMY color wheel for optimized color.

Only one power cable - dependent on the destination territory - will be supplied with the projector.

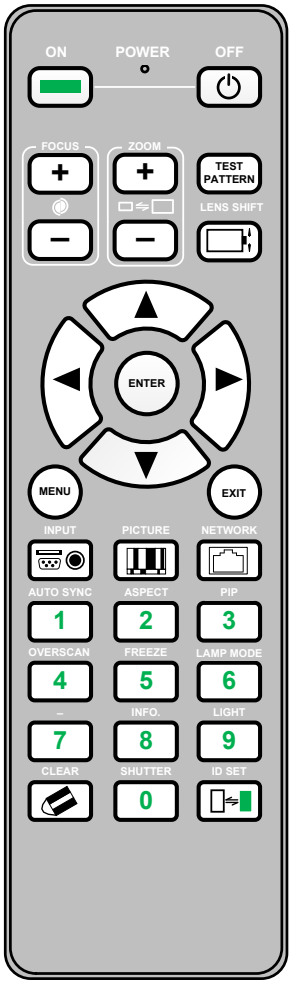
Getting To Know The Projector

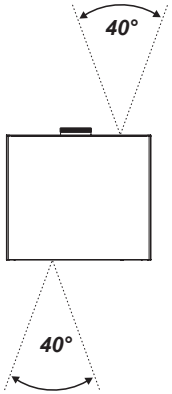
Front and rear views





Remote control





Infra-red reception

Notes

- *The projector can use an infra-red or a wired remote control.*

  Some of the controls are duplicated on the projector control panel, as shown on the next page.

- *For full details of how to use the controls and the menu system, see the **Operating Guide**.*

- *The air filters should be cleaned or changed regularly, depending on the installation environment.*

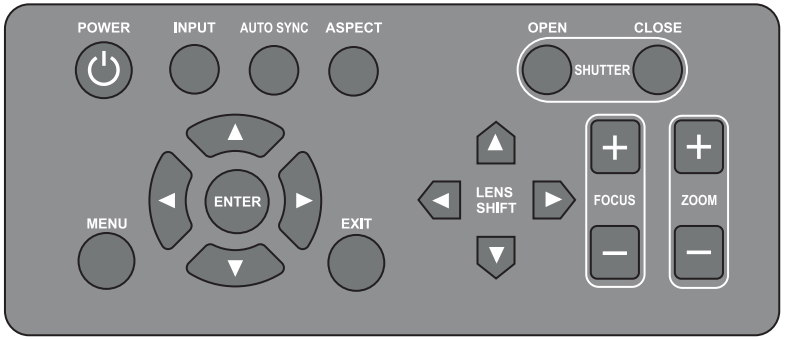
  The filters should be changed at the same time as the lamp is changed.

- *The projector lens is shipped separately.*

Control panel

Some of the controls from the remote control are duplicated on the projector control panel, as shown below.

The **EXIT** *button has the same function as the* **RETURN** *button on the remote control.*



Indicators

SHUTTER ***off*** = OPEN ***green*** = CLOSED

TEMP ***off*** = NO ERROR flashing red = ERROR (temperature)

LAMPS 1,2 ***off*** = OFF

flashing red = LAMP ERROR ***red*** = END OF LIFE

flashing green = LAMP WARM-UP ***green*** = ON

STATUS ***off*** = NO ERROR

flashing red (1 flash) = COVER OPEN ***flashing red (4 flashes)*** = FAN ERROR

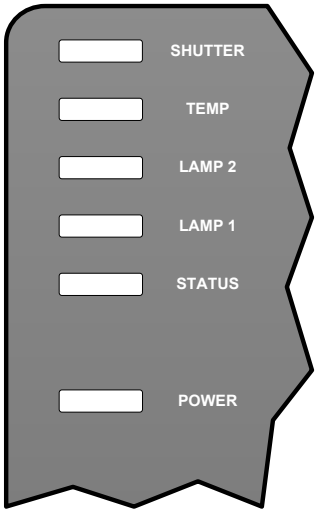
red = SYSTEM ERROR

POWER ***off*** = NO POWER

green = normal RUNNING mode ***red*** = STANDBY mode

flashing green = PROJECTOR WARM UP

flashing amber = PROJECTOR COOL DOWN



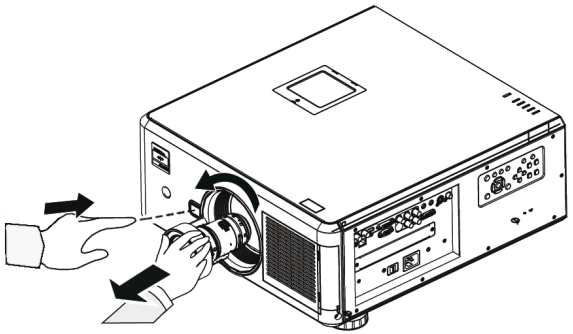
Notes

For full details of how to use the controls and the menu system, see the ***Operating Guide****.*

Changing The Lens, Lamps, Filters And Color Wheel

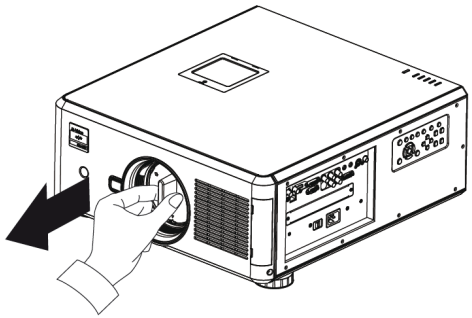
Removing the lens

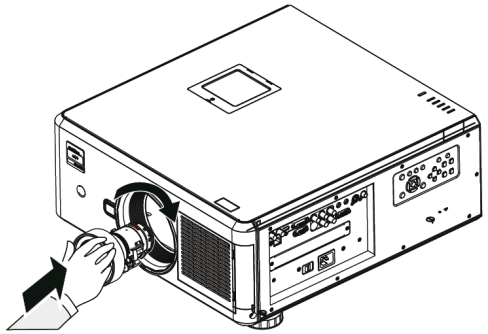
- Push in the lens release lever, and turn the lens anti-clockwise.
- Remove the lens.



Fitting the lens

- Remove the lens cap.
- Position the lens so that the labels are at the top, and gently insert it all the way into the lens mount.
- Push the lens in firmly, and turn it clockwise until it clicks into place.





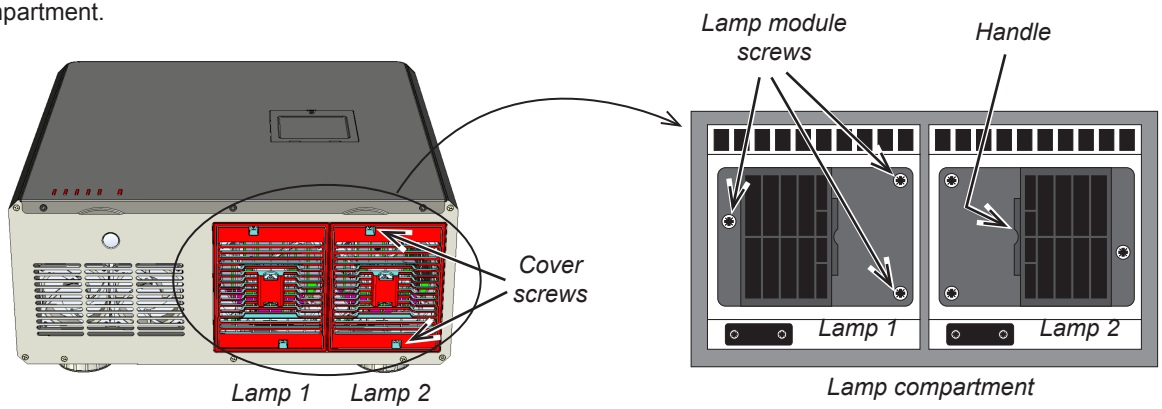
Notes

The projector lens is shipped separately.

The **Center Lens** *command must be used after a new lens is inserted. See the* ***Operating Guide*** *for more details.*

Changing a lamp

- Unscrew the two captive screws securing the cover for the lamp that needs changing.
- Open the lamp compartment.

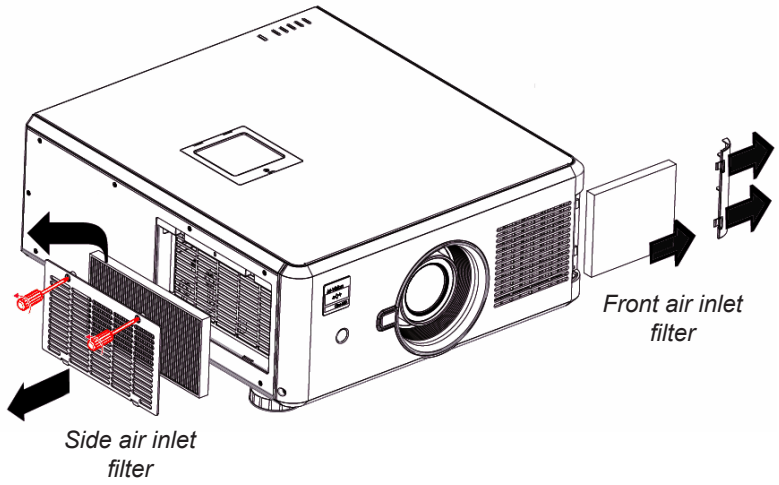


- Unscrew the three captive screws securing the lamp module.
- Pull firmly on the handle to remove the lamp module.
- Insert a new lamp module and fasten the screws.
- Replace the lamp compartment cover and fasten the screws.

Changing the filters

- Unscrew the captive screws securing the cover for the side air inlet.
- Replace the filter, making sure that the arrow showing the air flow direction is pointed ***inwards***.
- Replace the cover and fasten the screws.

- Remove the cover for the side air inlet by pushing it firmly to the right, as shown.
- Replace the filter, making sure that the arrow showing the air flow direction is pointed ***inwards***.
- Replace the cover.



Notes

Always allow the lamp to cool for 5 minutes before:

- disconnecting the power
- moving the projector
- changing the lamp

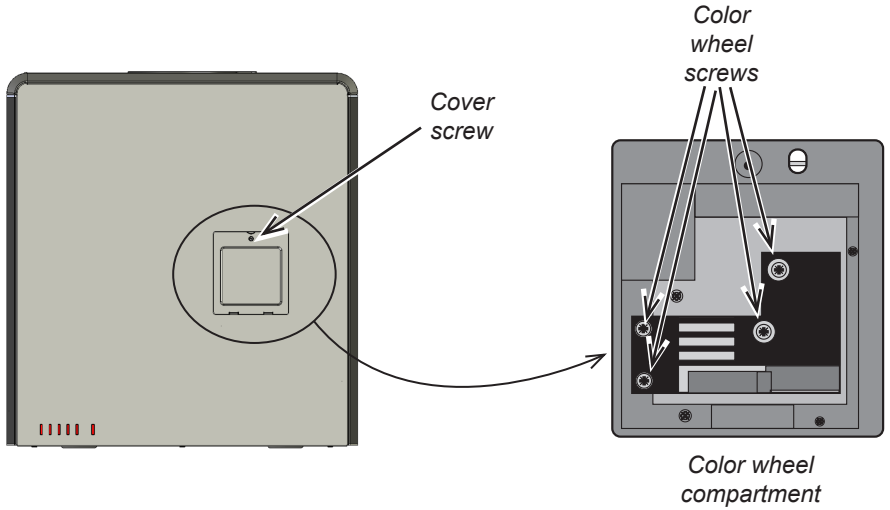
The lamp and color wheel must be changed only by suitably qualified personnel.

The projector will shut down if any of the covers are opened whilst in operation.

The filters should be changed at the same time as the lamp is changed.

Changing the color wheel

- Unscrew the captive screw securing the color wheel compartment cover.
- Open the color wheel compartment.
- Unscrew the four captive screws securing the color wheel.
- Remove the color wheel.
- Insert a new color wheel and fasten the screws.
- Replace the cover and fasten the screw.



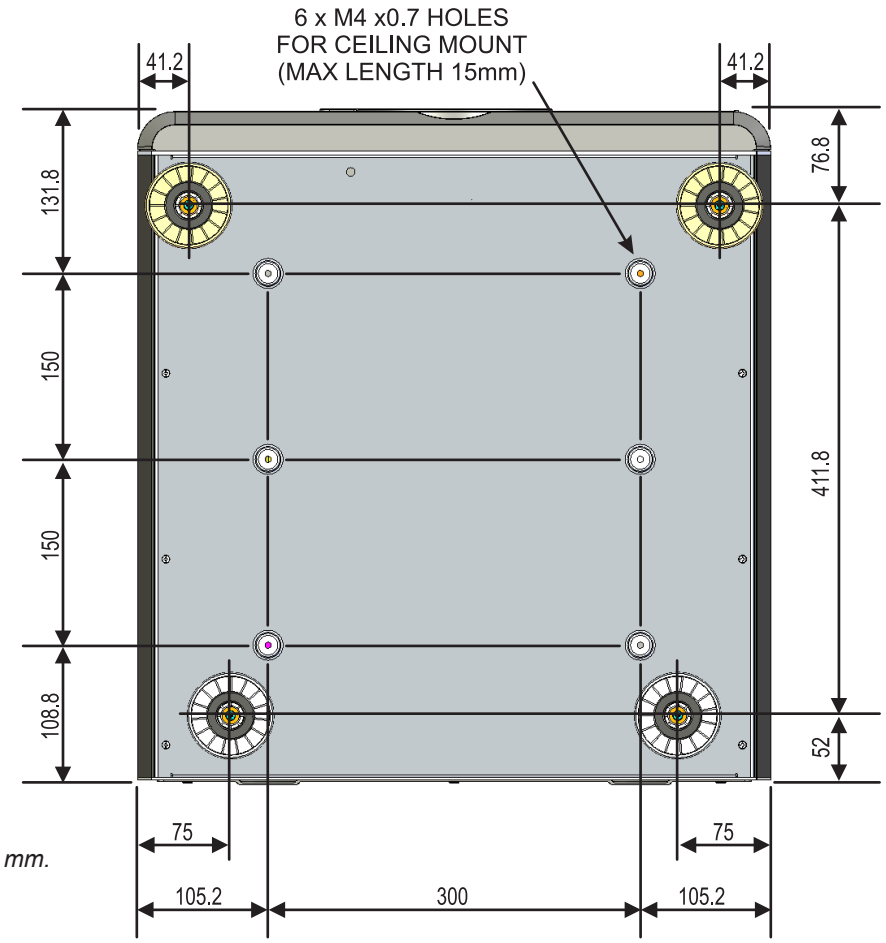
Notes

The lamp and color wheel must be changed only by suitably qualified personnel.

The projector will shut down if any of the covers are opened whilst in operation.

Positioning The Screen And Projector

- Install the screen, ensuring that it is in the best position for viewing by your audience.
- Mount the projector, ensuring that it is at a suitable distance from the screen for the image to fill the screen. Set the adjustable feet so that the projector is level, and perpendicular to the screen.
- The dimension drawing below shows the positions of the feet for table mounting, and the fixing holes for ceiling mounting.



All dimensions are in mm.

Notes

Always allow the lamp to cool for 5 minutes before:

- disconnecting the power
- moving the projector

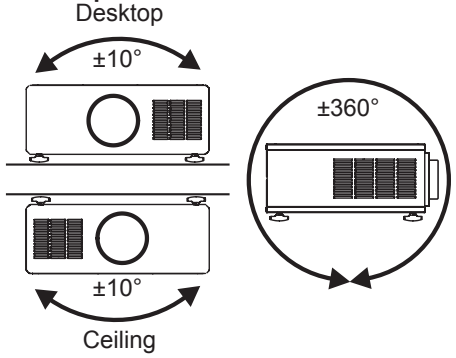
Ensure that there is at least 70cm (28in) of space between the ventilation outlets and any wall, and 50cm (20in) on all other sides.

If ceiling mounting, ensure there is 30cm (12in) of space between the projector and ceiling.

Backup safety chains or wires should always be used with ceiling mount installations.

Do not stack the projectors.

Do not tilt the projector more than ±10° in either direction, in desktop or ceiling mode, when in use, as this may cause serious lamp failure, damage the lamp module and cause extra cost on replacement.



Operating The Projector

Switching the projector on

- Connect the power cable between the mains supply and the projector. Switch on at the switch next to the power connector.
- Wait until the self-test has completed and the ***Power*** indicator on the projector control panel shows red. The lamp will be off and the projector will be in ***STANDBY*** mode.
- Press **POWER** ⏻ on the control panel or **POWER ON** on the remote control.

  The ***Power*** indicator on the control panel will flash green for a few seconds whilst the lamp comes up to full brightness. When the projector is ready for use, the ***Power*** indicator will show steady green.

Selecting an input signal or test pattern

Input signal

- Connect an image source to the projector. The signal should be automatically detected by the projector, and should be displayed within a two or three seconds.
- If more than one signal is connected, then select the image you want to display:

  Press **INPUT** repeatedly on the control panel or remote control to cycle through the inputs.

  or use **Input Selection** in the **INPUT menu**.

Test pattern

If you do not have an image source connected to the projector, then you can display a test pattern instead:

Press **TEST PATTERN** repeatedly on the remote control to cycle through the test patterns,

or select a **Test Pattern** from the **INPUT menu**.

To return to viewing the image from your image source, scroll through the test pattern list to **Off**.

Notes

☞ *For full details of how to connect an image source to the projector, see the* ***Connection Guide****.*

☞ *For full details of how to use the controls and the menu system, see the* ***Operating Guide****.*

Adjusting the lens

Zoom

- Use the **ZOOM +/–** buttons on the control panel or on the remote control to adjust the lens so that the image fills the screen.

  or use **Lens Control** in the **ALIGNMENT Menu**.

Focus

- Use the **FOCUS +/–** buttons on the control panel or on the remote control to adjust the lens until the image is sharp.

  or use **Lens Control** in the **ALIGNMENT Menu**.

Shift

- Use the **LENS SHIFT** buttons ◁, ▷, △ and ▽ on the control panel to adjust the position of the image,

  or press the **LENS SHIFT** button on the remote control then use ◁, ▷, △ and ▽ to adjust the position of the image.

  or use **Lens Control** in the **ALIGNMENT Menu**.

Adjusting the image

Orientation

- Use the **Rear Projection** or **Ceiling Mode** settings, in the **ALIGNMENT Menu**.

Aspect Ratio

- Press the **RESIZE** button on the control panel or the **ASPECT** button on the remote control to cycle through all the available settings.

  or use the **Aspect Ratio** setting in the **PICTURE Menu**.

Picture

- Press **PICTURE** on the remote control or use the menu controls, to open the **PICTURE Menu**.

  Use the sliders in the **PICTURE** menu to adjust the brightness, contrast etc.

Notes

*For full details of how to use the controls and the menu system, see the **Operating Guide**.*

Switching the projector off

- Press and hold **POWER** ⏻ on the control panel or **POWER OFF** on the remote control for 5 seconds.

  The lamp will go off, and the ***Power*** indicator on the control panel will flash amber for a few seconds whilst the lamp cools. The ***Power*** indicator on the control panel will then show red and the projector will be in ***Standby*** mode.

- Switch off at the switch next to the power connector. Disconnect the power cable from the projector.

Notes

⚠ **Always allow the lamp to cool for 5 minutes before:**

- disconnecting the power
- moving the projector

DIGITAL PROJECTION

CONNECTION GUIDE

E-Vision 8000 Series

High Brightness Digital Video Projector

Rev F July 2014

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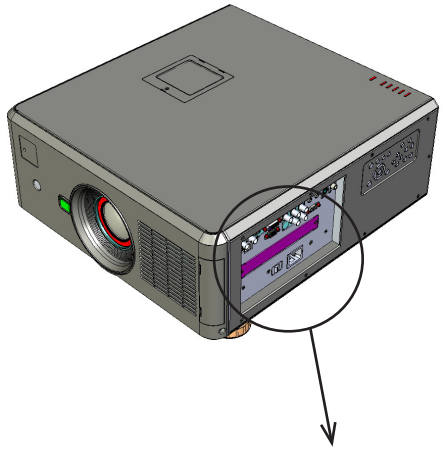
Signal Inputs And Outputs



Notes

*For a complete listing of pin configurations for all signal and control connectors, see **Wiring Details** later in this Guide.*

3G-SDI IN

- Connect a 3G-***SDI*** cable to the left hand SDI BNC.

3G-SDI OUT

- Connect a 3G-***SDI*** cable to the right hand SDI BNC, to distribute the signal to another projector.

HDMI

- Connect a ***HDMI*** cable to the HDMI connector.

DVI-D

- Connect a ***DVI-D*** cable to the DVI connector.

VGA

- If necessary, use the **VGA Setup** controls in the **PICTURE** menu. For more information, see the ***Operating Guide***.
- Set **Color Space** in the **INPUT** menu to **Auto** or **RGB-PC**.

COMPONENT

RGBHV, RGsB or RGBS

- Set **Color Space** in the **INPUT** menu to **Auto** or **RGB-Video**.

YPbPr or YCbCr

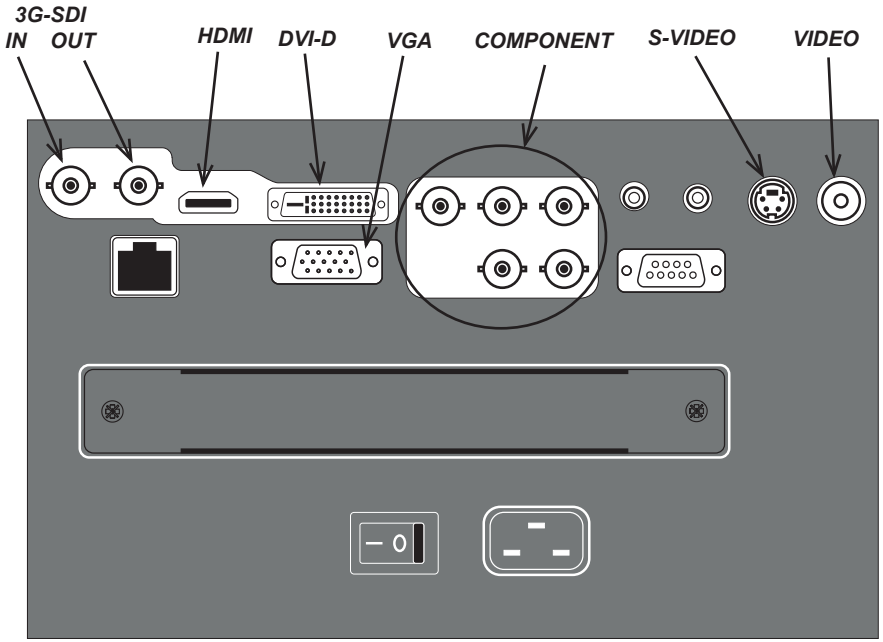
- Set **Color Space** in the **INPUT** menu to **YPbPr** or **YCbCr**.

S-Video

- Connect an ***S-Video*** cable to the 4-pin mini-DIN.

Video

- Connect a ***composite video*** cable to the single RCA phono connector.
- Set **Video Standard** in the **INPUT** menu to **Auto**, **PAL**, **SECAM**, or **NTSC**



Supported Signal Input Modes

Standard		Resolution	Refresh Rate (Hz)	Total number of lines	Horizontal Frequency (kHz)	VIDEO	S-VIDEO	COMPONENT	DVI-A / VGA	DVI -D / HDMI	3G-SDI
SDTV	480i	720 x 480	60	525	15.73	✓	✓	✓			✓
	576i	720 x 576	50	625	15.63	✓	✓	✓			✓
EDTV	480p	720 x 480	60	525	31.51			✓		✓	
	576p	720 x 576	50	625	31.25			✓		✓	
HDTV	720p50	1280 x 720	50	750	37.51			✓		✓	
	720p60	1280 x 720	60	750	45.00			✓		✓	✓
	1035i60	1920 x 1080	35	1125	33.75			✓		✓	✓
	1080sf25	1920 x 1080	25	1125	28.13			✓		✓	✓
	1080sf30	1920 x 1080	30	1125	33.75			✓		✓	✓
	1080i50	1920 x 1080	50	1125	28.13			✓		✓	✓
	1080i59	1920 x 1080	59.94	1125	33.72			✓		✓	✓
	1080i60	1920 x 1080	60	1125	33.75			✓		✓	✓
	1080p24	1920 x 1080	24	1125	27.00			✓		✓	✓
	1080p25	1920 x 1080	25	1125	28.13			✓		✓	✓
	1080p30	1920 x 1080	30	1125	33.75			✓		✓	✓
	1080p50	1920 x 1080	50	1125	56.24			✓		✓	✓
	1080p59	1920 x 1080	59.94	1125	67.43			✓		✓	✓
	1080p60	1920 x 1080	60	1125	67.48			✓		✓	✓
COMPUTER	480p	640 x 480	60	525	31.47				✓	✓	
	VGA75	640 x 480	75	500	37.50				✓	✓	
	MACI	640 x 480	66.59		35.00				✓	✓	
	SVGA60	800 x 600	60	628	37.88				✓	✓	
	MACII	832 x 624	74.54		49.10				✓	✓	
	XGA60	1024 x 768	60	806	48.36				✓	✓	
	XGA70	1024 x 768	70	806	56.48				✓	✓	
	XGA85	1024 x 768	85	808	68.68				✓	✓	
	WXGA60	1280 x 768	60	798	47.78				✓	✓	
	WXGA+60	1440 x 900	60	934	55.94				✓	✓	

continued on next page...

Notes

...continued from previous page

Standard		Resolution	Refresh Rate (Hz)	Total number of lines	Horizontal Frequency (kHz)	VIDEO	S-VIDEO	COMPONENT	DVI-A / VGA	DVI-D / HDMI	3G-SDI
	SXGA60	1280 x 1024	60	1066	63.98				✓	✓	
	SXGA+60	1400 x 1050	60	1089	65.32				✓	✓	
	UXGA60	1600 x 1200	60	1245	75.00				✓	✓	
	VESA1080p	1920 x 1080	60	1120	67.50				✓	✓	
	WUXGA60	1920 x 1200	60	1235	74.04				✓	✓	

Notes

Control Connections

LAN

- The projector's features can be controlled via a LAN connection, using the control strings described in the ***Remote Communications Guide***..
- The LAN IP Address of the projector can be set by using the ***Web Configuration Utility***. To see what the Address is set to, you can view the current Network settings in the **CONTROL** Menu.

For more information about these settings, see the ***Operating Guide***.

RS232

- The RS232 port can be used to download firmware updates, issued from time to time by Digital Projection.
- The projector's features can be controlled via a serial connection, using the control strings described in the ***Remote Communications Guide***.

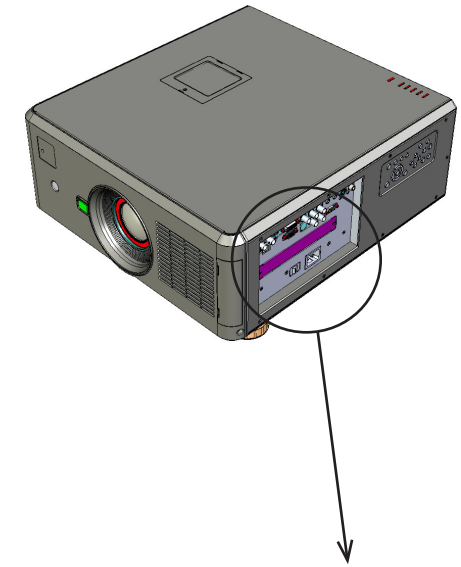
Wired Remote Control

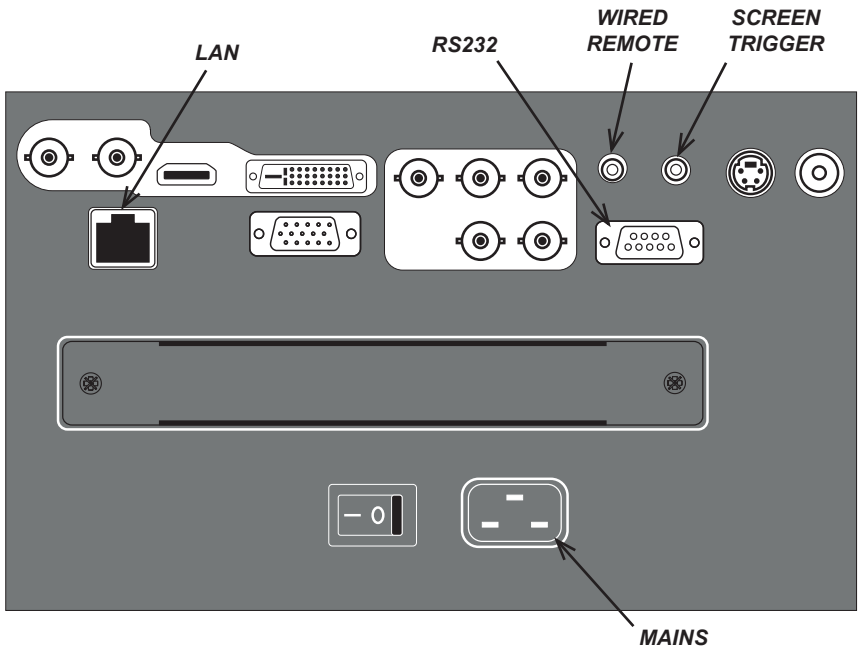
- If infrared signals from the remote control cannot reach the projector due to excessive distance or obstructions such as walls or cabinet doors, you can connect an external IR repeater to the Remote Control input, and position its IR sensor within range of the operator.

Note that plugging in the remote control cable will disable the infra-red.

Screen Trigger

- The Trigger output can be connected to an electrically operated screen, automatically deploying the screen when the projector is switched on, or activating curtains when the aspect ratio is changed.





Notes

*For a complete listing of pin configurations for all signal and control connectors, see **Wiring Details** later in this Guide.*

Eco Network Power *must be set to* **Standard**, *if you wish to control the projector via the LAN connection.*

Only one remote connection can be used at any one time as determined by the **Projector Control** *setting in the* **CONTROL** ***menu***.

For full details of how to use the menu system, see the ***Operating Guide***.

Wiring Details

Signal inputs and outputs

3G-SDI

75 ohm BNC

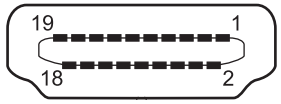
SMPTE 292 / HD-SDI signals are very high speed digital signals which require better quality coaxial cable than conventional analogue video. The data rate is 1.5 Gigabits per second.

In choosing cable length and connectors for any installation the frequency response loss in decibels should be proportional to √f, from 1MHz, to 1.5GHz. The following or similar cable specification should be used to ensure fault free communication between source and projector:

Belden 8281 cable or equivalent

HDMI input

19 way type A connector



pin view of panel connector

1	TMDS Data 2+
2	TMDS Data 2 Shield
3	TMDS Data 2-
4	TMDS Data 1+
5	TMDS Data 1 Shield
6	TMDS Data 1-
7	TMDS Data 0+
8	TMDS Data 0 Shield
9	TMDS Data 0-
10	TMDS Clock+
11	TMDS Clock Shield
12	TMDS Clock-
13	CEC
14	not connected
15	SCL (DDC Clock)
16	SCA (DDC Data)
17	DDC/CEC Ground
18	+5 V Power
19	Hot Plug Detect

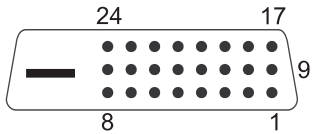
Notes

*For full details of all input settings, see the **INPUT menu** in the **Operating Guide**.*

DVI-D

24 way D-type connector

1	TMDS Data 2-
2	TMDS Data 2+
3	TMDS Data 2 Shield
4	unused
5	unused
6	DDC Clock
7	DDC Data
8	unused
9	TMDS Data 1-
10	TMDS Data 1+
11	TMDS Data 1 Shield
12	unused
13	unused
14	+5 V Power
15	Ground
16	Hot Plug Detect*
17	TMDS Data 0-
18	TMDS Data 0+
19	TMDS Data 0 Shield
20	unused
21	unused
22	TMDS Clock Shield
23	TMDS Clock+
24	TMDS Clock-



pin view of female connector

* Hot plug detect (HPD) is fully DVI compliant. DVI sources detect the presence of a display device by providing +5V on pin 14 and looking for +5V on pin 16. Whenever the projector is operational, and 5V is present on pin 14, pin 16 will be held at +5V.

EDID is available even when the projector is switched off.

Operational means that the projector is powered up. Non operational states are powered down and some self test and reprogramming modes.

High Definition Content Protection (HDCP) is supported on this input.

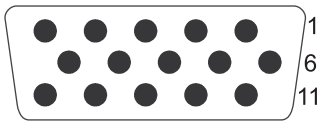
Notes

For full details of all input settings, see the **INPUT** ***menu*** *in the* ***Operating Guide****.*

VGA

15 way D-type connector

1	R
2	G
3	B
4	unused
5	Digital Ground (H Sync)
6	R Ground
7	B Ground
8	G Ground
9	+5v
10	Digital Ground (V Sync/DDC)
11	unused
12	SDA
13	H Sync
14	V Sync
15	SCL

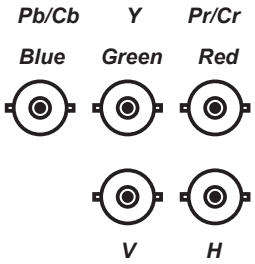


pin view of female connector

COMPONENT

5 x 75 ohm BNC

RGBHV	**RGsB**	**YPbPr**	**YCbCr**
Green	Green + Sync	Y	Y
Blue	Blue	Pb	Cb
Red	Red	Pr	Cr
Hsync			
Vsync			



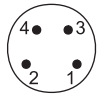
Notes

For full details of all input settings, see the **INPUT** ***menu*** *in the* ***Operating Guide****.*

S-Video input

4 pin mini-DIN

1	Y Ground
2	C Ground
3	Luminance (Y)
4	Chrominance (C)



pin view of female connector

Video input

1 x RCA Phono

Composite Video

Notes

For full details of all input settings, see the **INPUT** ***menu*** *in the* ***Operating Guide****.*

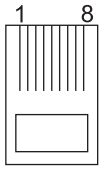
Control connections

LAN connection

10BaseT Unshielded Twisted Pair cable

The standard wire colors are as follows:

1	White / Orange stripe
2	Orange
3	White / Green stripe
4	Blue
5	White / Blue stripe
6	Green
7	White / Brown stripe
8	Brown



top view of cable connector (clip is underneath)

Crossed cable

(used to connect directly to a computer with no hub or network.)
(Note that only the green and orange pairs are crossed)

1	White / Orange stripe	White / Green stripe	1
2	Orange	Green	2
3	White / Green stripe	White / Orange stripe	3
4	Blue	Blue	4
5	White / Blue stripe	White / Blue stripe	5
6	Green	Orange	6
7	White / Brown stripe	White / Brown stripe	7
8	Brown	Brown	8

Notes

For full details of all control settings, see the **CONTROL** ***menu*** *in the* ***Operating Guide****.*

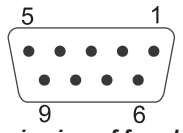
Use:

a straight cable to connect to a hub or network, or

a crossed cable as shown here to connect ONLY to a computer directly.

RS232 Serial control input

1	unused
2	Received Data (RX)
3	Transmitted Data (TX)
4	unused
5	Signal Ground
6	unused
7	unused
8	unused
9	unused



pin view of female connector

Null-modem cable

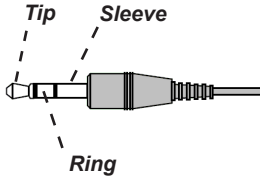
(used to connect the projector to a computer)

RX	2	---	3	TX
TX	3	---	2	RX
GND	5	---	5	GND

Wired Remote control connection

3.5mm mini jack

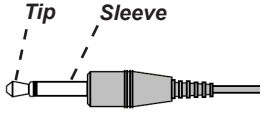
Tip	Not connected
Ring	Signal
Sleeve	Ground



Screen Trigger output

3.5mm mini jack

Tip	Signal
Sleeve	Ground



Notes

For full details of all control settings, see the **CONTROL** ***menu*** *in the* ***Operating Guide****.*

The projector is a DTE, so use:

a straight cable to connect to a modem, or

a null-modem cable as shown here to connect to another DTE such as a computer.

Note that plugging in the remote control cable will disable the infra-red.

DIGITAL PROJECTION

OPERATING GUIDE

E-Vision 8000 Series

High Brightness Digital Video Projector

Rev F July 2014

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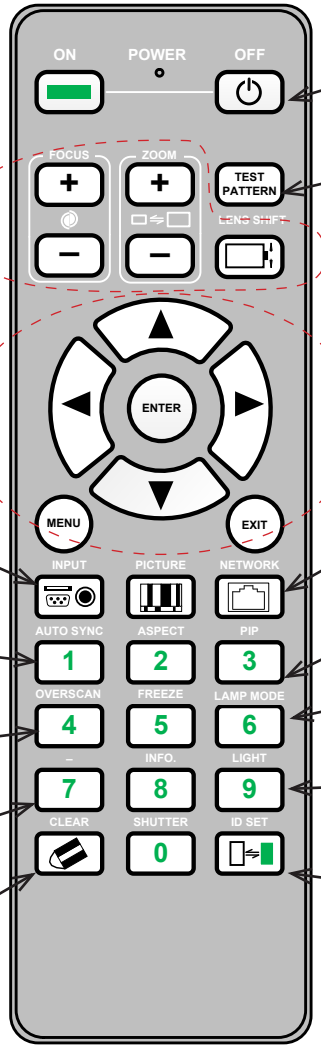
Using The Remote Control



LENS controls

POWER controls

TEST PATTERN
select from a list of available test patterns

MENU controls

NETWORK
brings up the Network Information page

PIP
switches the PIP image on or off

LAMP MODE
brings up the Lamps page

LIGHT
illuminates the buttons on the remote control for 10 seconds

ID SET
View ID status (Hold for 5 seconds)

COMBINATION: ID SET + #
Set the ID (Hold for 5 seconds)

COMBINATION: ID SET + CLEAR
Clear ID (Hold for 5 seconds)

INPUT
select from the available video input signals

AUTO SYNC
the projector will re-synchronise with the current input signal

OVERSCAN
select from Off Crop or Zoom

—
has no function on this projector

CLEAR
Used only in combination with ID SET

PICTURE
opens the Picture menu

ASPECT
select from a list of available aspect ratios

FREEZE
freeze the current image frame

INFO
opens the Service menu

SHUTTER
opens or closes the shutter

Notes

Some options and controls may not be available due to settings in the menus.

For full details of how to use the menu system, see later in this guide.

Test Pattern

- Press **ENTER** to display a Test Pattern.
- Use ◁ or ▷ to scroll through the following Test Patterns:

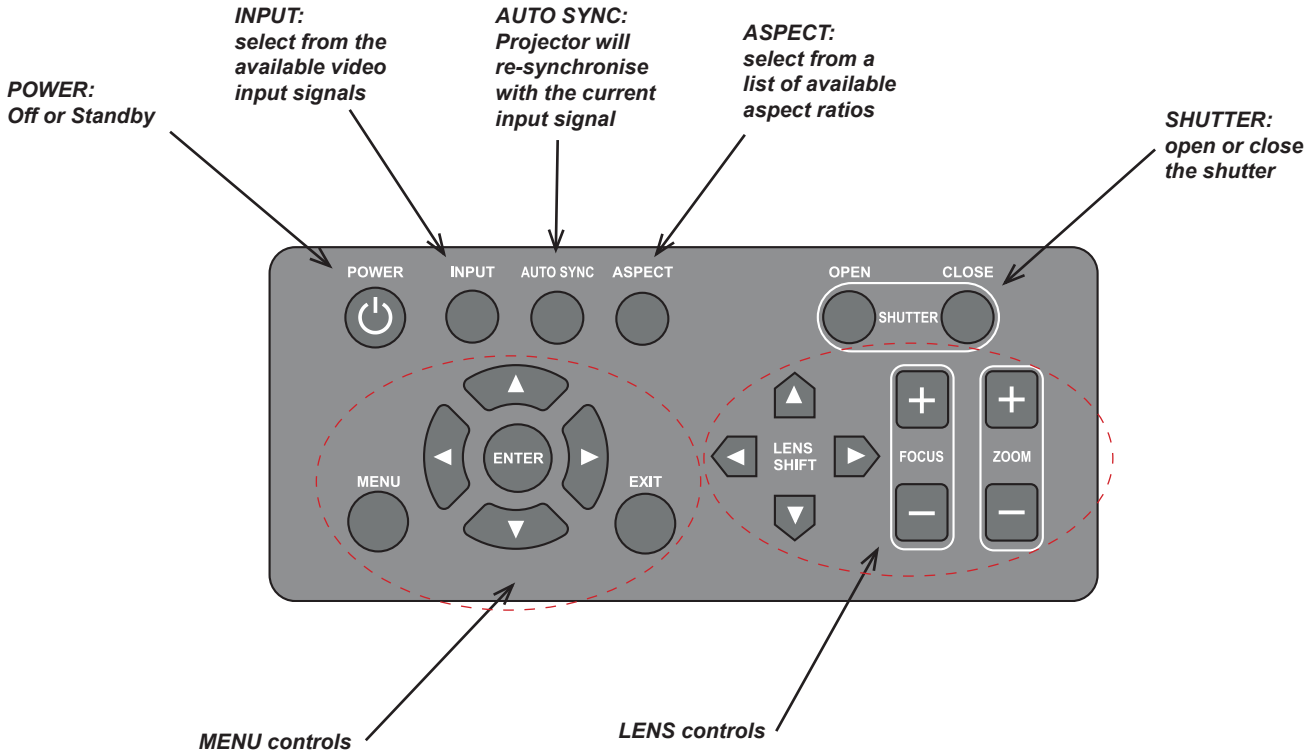
  ... Off, Color Bars, Alignment Grid, Burst, Red, Green, Blue, White, Black, Cross Mark, Cross Hatch + Mark, Corrected Red, Corrected Green, Corrected Blue, Horizontal Ramp, Off ...

- To return to viewing the image from your image source, use ◁ or ▷ to scroll through the list to **Off**.

To protect the lamps from thermal shock, it will not be possible to change the **Lamp Mode** *more than once within five minutes.*

Use the ID SET feature to assign discrete ID addresses for up to nine projectors. This will enable you to operate each projector separately with a dedicated remote control.

Using The Control Panel



Notes

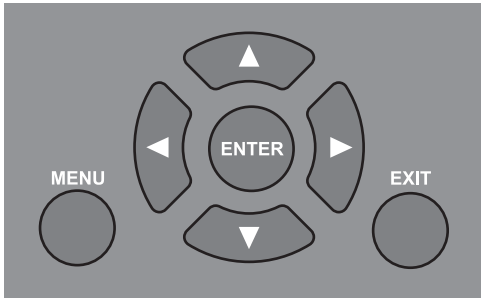
Some options and controls may not be available due to settings in the menus.

For full details of how to use the menu system, see later in this guide.

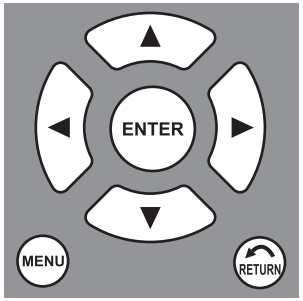
Using The Menus

Use the buttons on the projector control panel or on the remote control, to access the menu system.

- To open the on-screen display (OSD), press **MENU**. To close, press **EXIT/ RETURN**.



Projector control panel

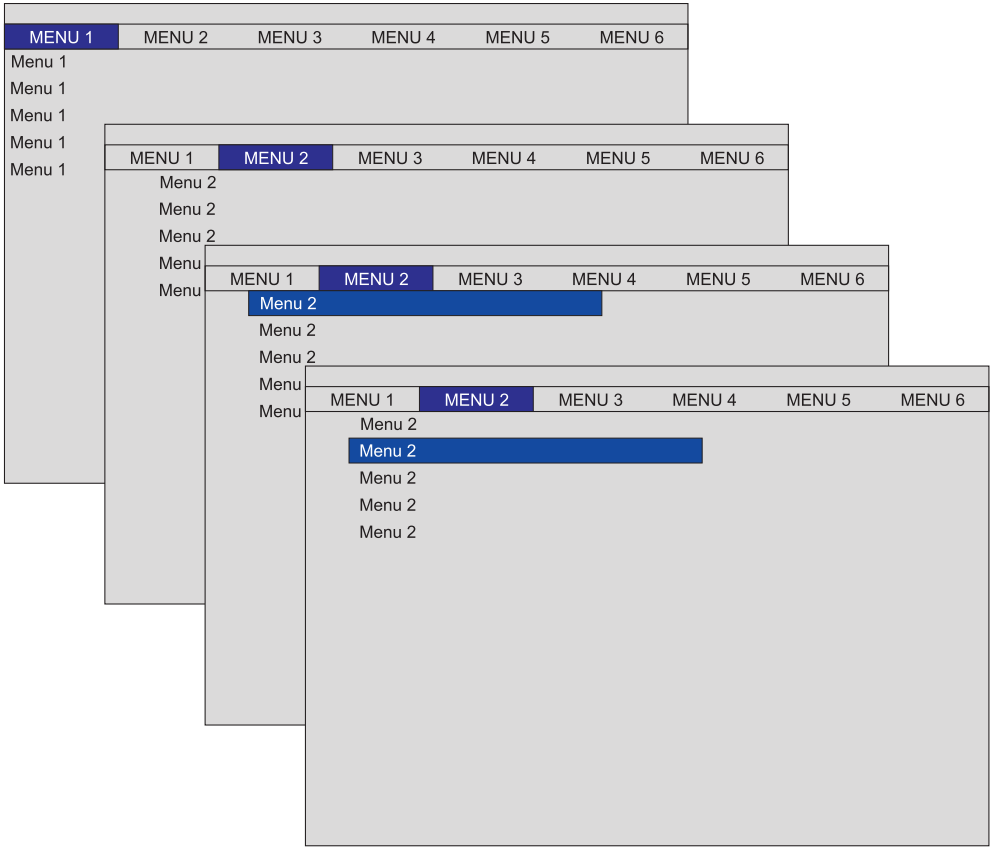


Remote control

Navigating the menus

- Select a menu using ◁ and ▷,
- then open the menu by pressing ▽.

  The first item in the menu is highlighted.



- Select an item in the menu using △ and ▽.

- To open another menu, first close the current menu by pressing **MENU**.

Notes

Some menu options and controls may not be available due to settings in other menus. These will be shaded grey on the actual menu.

Submenus

- Select a submenu using

  △ and ▽.

- then open the submenu by pressing **ENTER**.

  The submenu appears ***to either the left or right side of*** the menu it was called from, depending on the space available.

  The name of the submenu is shown at the top.

- To close the submenu, press **MENU**.

Sometimes, a submenu leads to a sub submenu:

- Select the sub submenu using

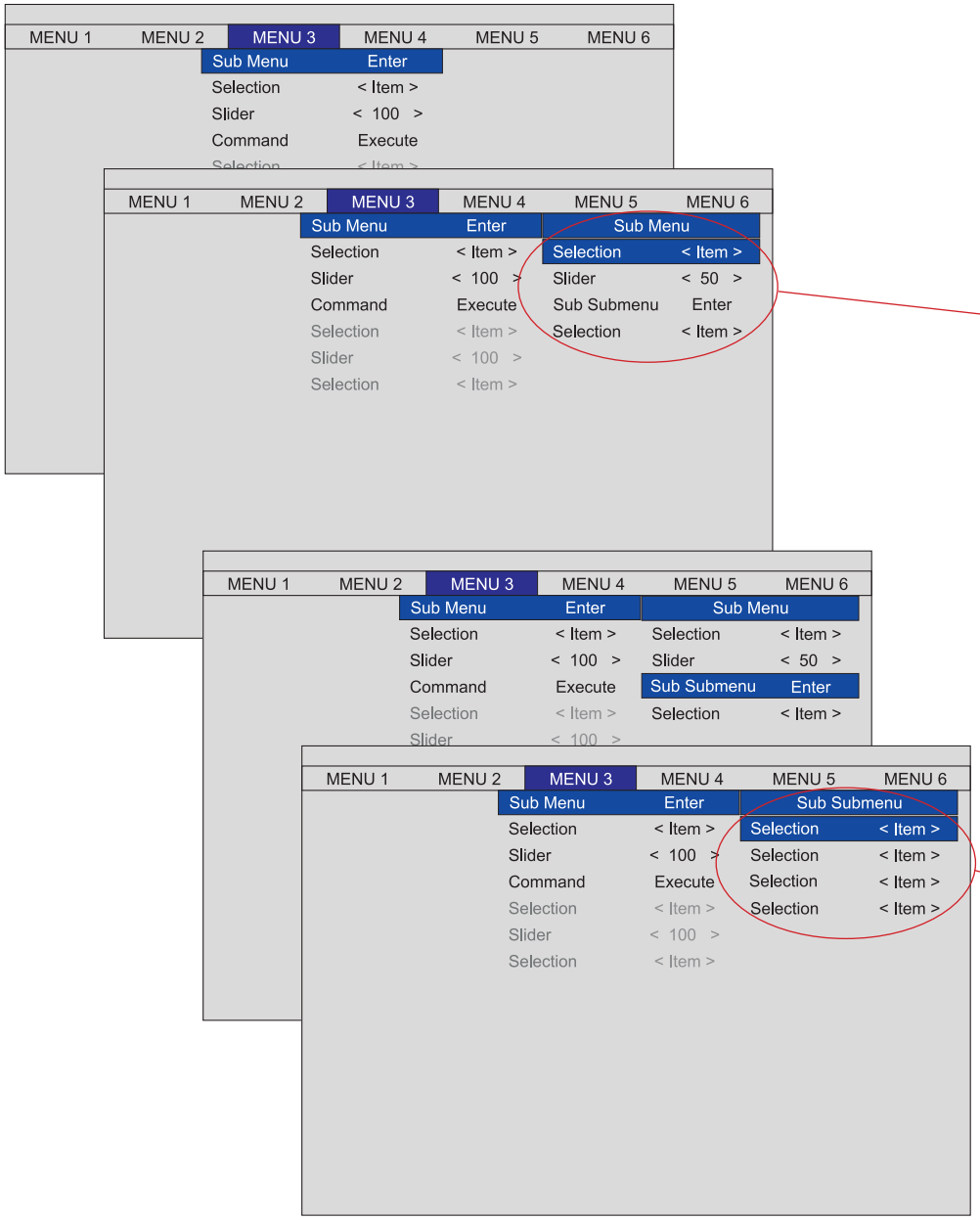
  △ and ▽.

- then open it by pressing **ENTER**.

  The sub submenu appears ***in place of*** the submenu it was called from.

  The name of the sub submenu is shown at the top.

- To close the sub submenu, press **MENU**.



Notes

Some menu options and controls may not be available due to settings in other menus. These will be shaded grey on the actual menu.

*The Sub Menu appears **to either the left or right side of** the menu it was called from, depending on the space available.*

*The Sub Submenu appears **in place of** the submenu it was called from.*

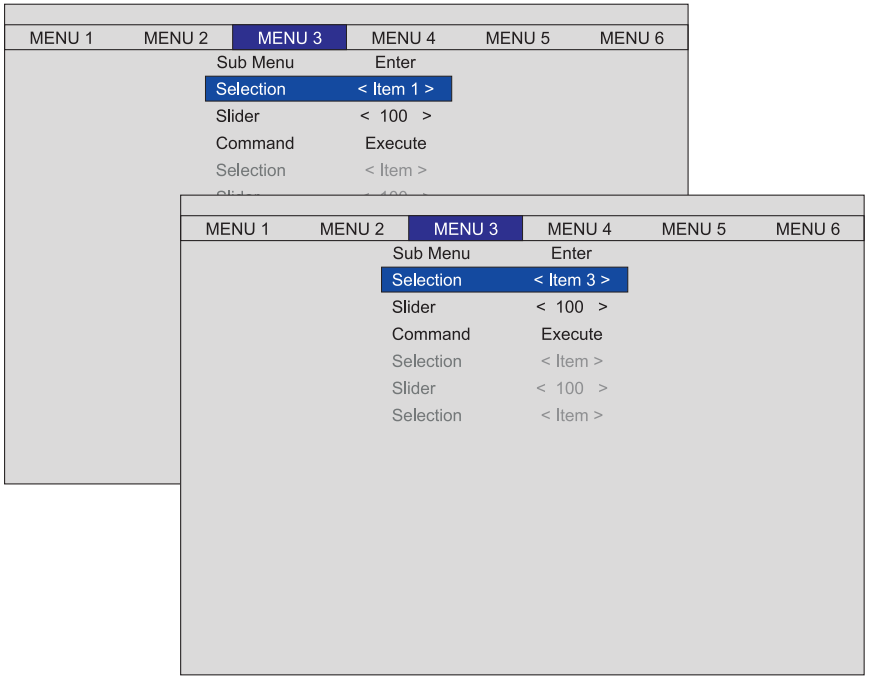
Selecting parameters

Most parameters are changed by selecting from a list:

- Select from the list using

  ◁ and ▷.

- The change will usually be made immediately.



Some parameters are changed by selecting from a submenu.

- Press **ENTER** to open the menu.

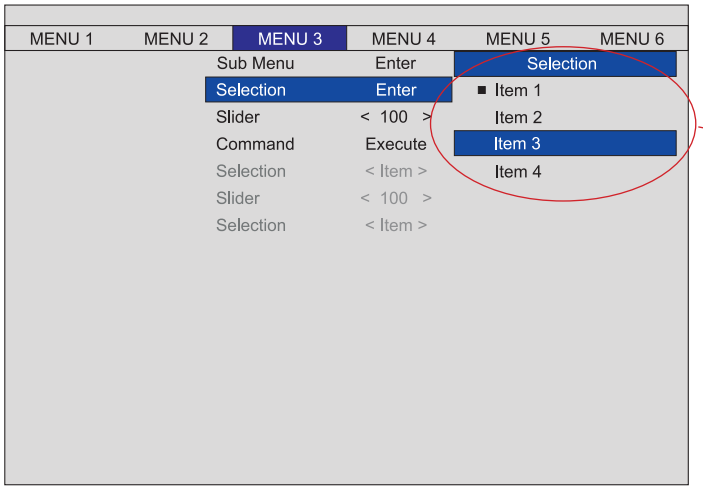
  The submenu appears ***to the left or right side, or in place of*** the menu it was called from, depending on the space available.

- The item that is currently selected is marked with a block: ■.

- Select from the submenu using

  △ and ▽.

- The change will be made when you press **ENTER** to confirm the selection.



Notes

Some menu options and controls may not be available due to settings in other menus. These will be shaded grey on the actual menu.

There may be a short delay when changing some parameters, due to internal processing time.

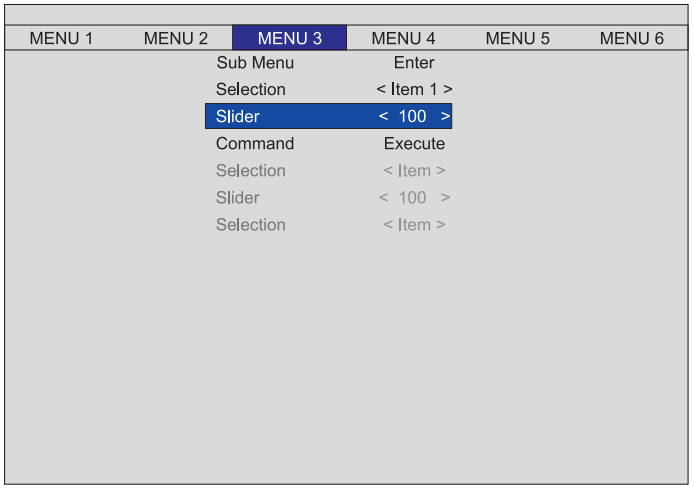
*The submenu appears **to the left or right side, or in place of** the menu it was called from, depending on the space available.*

Sliders

- Use ◁ or ▷ to adjust the value.

  The menu will disappear, to be replaced by a slider bar.

- To return to the menu, press **MENU**.



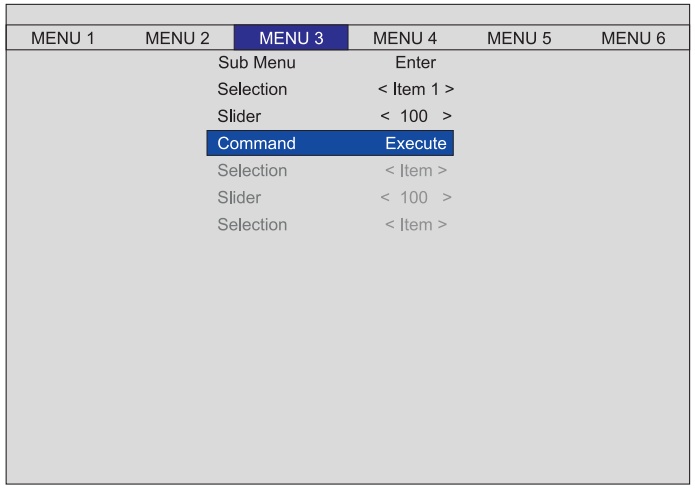
Commands

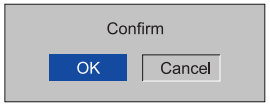
- To execute the command, press **ENTER**.

  In this example,

- use ◁ or ▷ to move the **blue** highlight to **OK** or **Cancel**,

- then press **ENTER** to confirm your selection.





Notes

Some menu options and controls may not be available due to settings in other menus. These will be shaded grey on the actual menu.

A Tour Of The Menus

INPUT menu

INPUT	PICTURE	LAMPS	ALIGNMENT	CONTROL	SERVICE
Input Selection		Enter			
PIP		Enter			
Test Pattern		Enter			
Color Space	<	Auto	>		
Input Lock	<	Auto	>		
Background	<	Logo	>		
Video Standard	<	Auto	>		
Auto Sync Adjust	<	Always	>		

Input Selection

- Press **ENTER** to open the **Input Selection** menu, then select an input from the list.

PIP (Picture in Picture) submenu

- Press **ENTER** to open the **PIP** submenu.

PIP Option

- Set **PIP Option** to **On** or **Off**.

PIP Input

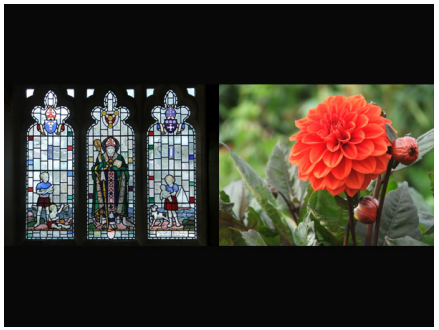
- Select a **PIP Input** from the drop-down list. The inputs are divided into two groups – the main image must be from one group, and the subimage must be from the other group.
- Group A: VGA, Component/BNC, Composite, S-Video
- Group B: HDMI, DVI, 3G-SDI

PIP Swap

- Swaps the main and PIP image input.

Position

- Select a **Position** or **Split L-R** for the PIP image.



PIP (split L-R)

PIP (top left)

INPUT	PICTURE	LAMPS	ALIGNMENT	CONTROL	SERVICE
PIP Option		< On	>		
PIP Input		Enter			
PIP Swap		Enter			
Position		< Top Left	>		

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

In this example, the flower is the main image, and the window is the sub-image.

*The two images MUST be from different **Input groups**.*

Input Menu
PIP Submenu

INPUT menu *continued*

Test Pattern

- Press **ENTER** to display a Test Pattern.
- Use ◁ or ▷ to scroll through the following Test Patterns:

  ... Off, Color Bars, Alignment Grid, Burst, Red, Green, Blue, White, Black, Cross Mark, Cross Hatch + Mark, Corrected Red, Corrected Green, Corrected Blue, Horizontal Ramp, Off ...
- To return to viewing the image from your image source, use ◁ or ▷ to scroll through the list to **Off**.

Color Space

- Set this to **Auto**, except when the projector has problems selecting between **YCrCb**, **YPrPb**, **RGB-PC** and **RGB-Video**.

Input Lock

- Set this to **Auto**, except when the projector has problems locking on to **48Hz**, **50Hz** and **60Hz** signals.

Background

- Set this to determine what appears on screen when the projector is searching for a valid input source.

Video Standard

- Set this to **Auto**, unless the projector has problems selecting between **PAL**, **SECAM** and **NTSC**.

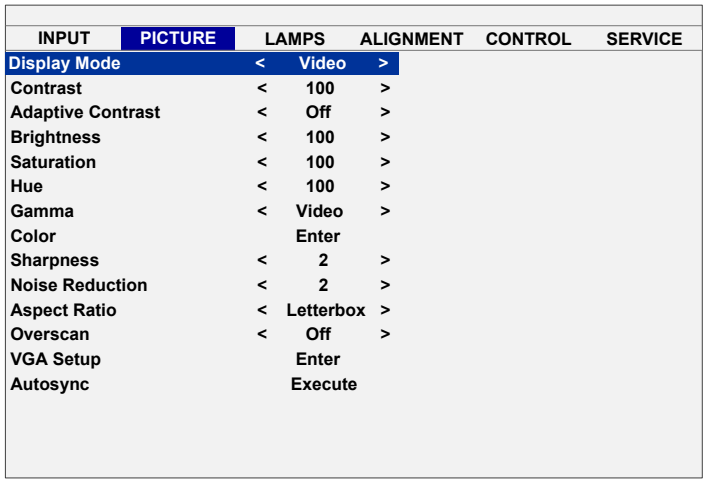
Auto Sync Adjust

- Select from
  - **Off**: Auto Sync Adjustment is never performed.
  - **Auto** – Projector will compare with the previous five signals stored in memory, and then recall those settings if possible.
  - **Always** - Projector will perform auto setup every time a new signal source is connected, ignoring any settings in memory.

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

PICTURE menu



Display Mode

- Select one of the Display modes as required.

Contrast, Brightness, Saturation, Hue

- Adjust the sliders for these settings, as required.

Adaptive Contrast

- Set this to **On** or **Off** as required.

Gamma

- Select one of the Gamma settings as required.

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

PICTURE menu *continued*

Color submenu

- Press **ENTER** to open the Color submenu.

Color Temperature

- Set this to suit the specification of the input source, or to improve the appearance of the projected image.

Trim

- Set the **Red**, **Green** and **Blue Lift** and **Gain** settings, to improve the appearance of the projected image.

Sharpness, Noise Reduction

- Adjust the sliders for these settings, as required.

Aspect Ratio

- Set **Aspect Ratio** to suit the incoming video signal.

  The **5:4**, **4:3**, **16:10**, **16:9**, **1.88:1** and **2.35:1** settings will stretch the image to the selected aspect ratio, leaving black bars at the top and bottom or sides of the screen, depending on the aspect ratio of the projector.

  The **Letterbox** setting can be used where a wide screen image has been supplied in a narrower format with black bars at the top and bottom. The top and bottom of the image will be cropped,and the image stretched to fill the screen.

  The **Native** setting will scale the image to fit either the full height or width of the screen, whilst retaining the aspect ratio of the image.

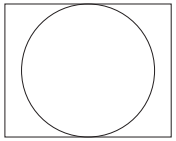
  The **Unscaled** setting will display the image pixel for pixel at its supplied resolution, in the centre of the screen. There may be black bars at the top and bottom or sides of the screen, or the image may be cropped, depending on the video signal and the aspect ratio of the projector.

Notes

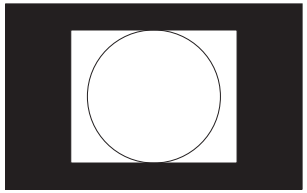
*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

***Color Temperature** is unavailable when **Edge Blend** is enabled.*

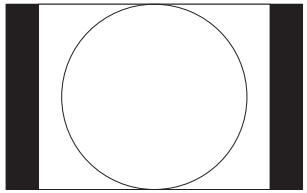
*The full height and width of the screen will depend on the projector model. For more information, see the **Specification leaflet**, or the **Important Information**.*



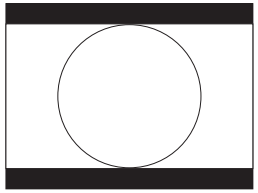
5:4 image



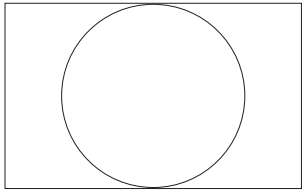
displayed unscaled



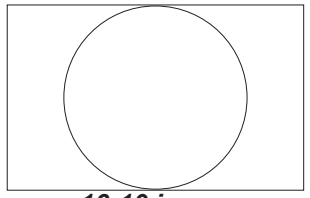
displayed at native



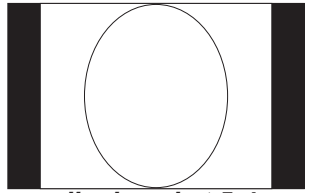
letterbox image



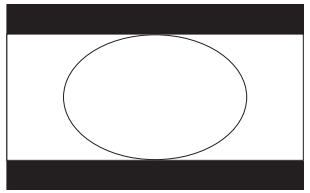
stretched and cropped



16:10 image



displayed at 5:4



displayed at 2.35:1

PICTURE menu *continued*

Overscan

- Set this to **Off On** or **Zoom** as required.

VGA Setup submenu

- Press **ENTER** to open the VGA Setup submenu.

Horizontal Total, Start and Phase, Vertical Start

- Adjust the sliders for these settings, as required to suit the incoming image.

Auto Sync

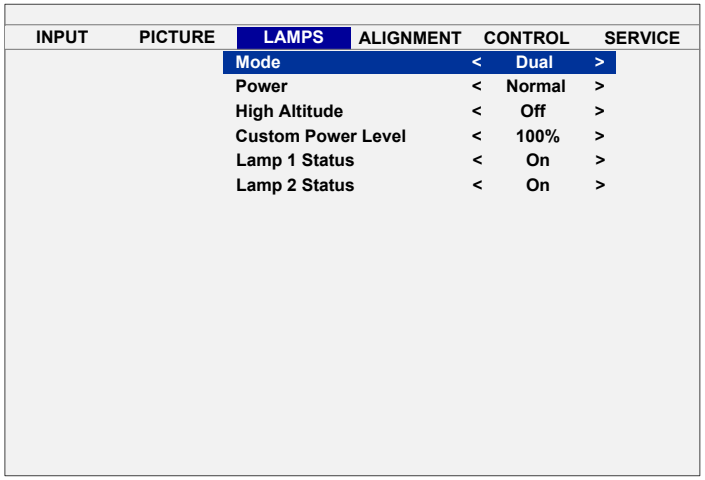
- Press **ENTER** to force the projector to re-synchronise with the input signal.

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

Overscan is used to compensate for noisy or badly defined image edges, by cropping the image, or increasing the size of the image to force the edges off-screen.

LAMPS menu



Mode

- Set this to **Single** or **Dual** as required.

  When the mode is changed, it will not be possible to change it again within five minutes.

Power

- Set this to **Normal** for 100% power, **Eco** for 80% power or **Custom** to enable the Custom Power slider.

High Altitude Mode

- Set this to **On** if it is necessary to have the cooling fans running at high speed.

Custom Power Level

- Set the slider as required.

Lamp Status

- For information only.

Notes

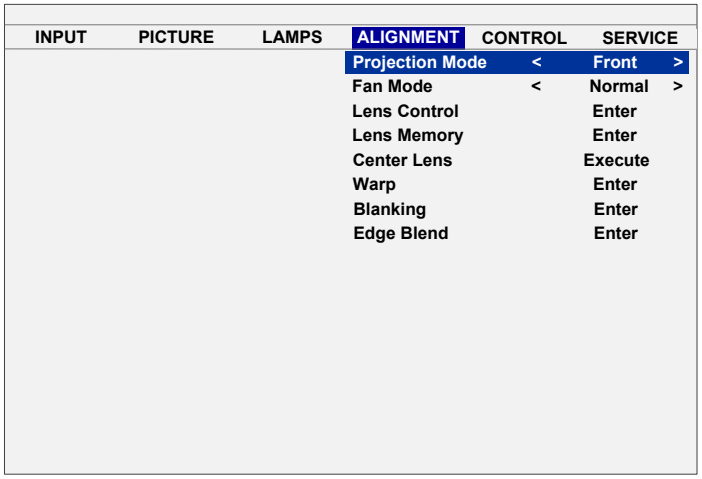
*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

*When **Lamp Mode** is set to **Single**, the projector will turn on using the lamp with the least hours of use.*

*To protect the lamps from thermal shock, it will not be possible to change the **Lamp Mode** more than once within five minutes.*

*The **Power** setting should be set to **Custom**, if you want to use the **Custom Power Level** slider.*

ALIGNMENT menu



Projection Mode

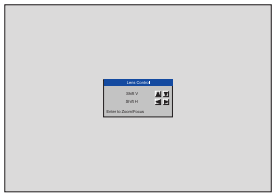
- **Front** and **Rear** define whether the projector is in front of the screen or behind it.
  Set to **Ceiling + Front** or **Ceiling + Rear** if the projector is ceiling mounted.

Fan Mode

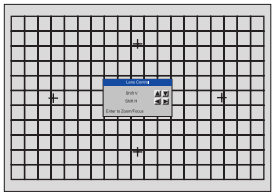
- Adjusts the fan speeds to optimise cooling when the projector is in vertical orientation.
  Set to **Up** or **Down** as appropriate when projecting lens up or down.

Lens Control

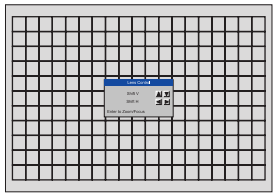
- Press **ENTER** to display the Lens Control box.
- Press **ENTER** again to scroll through the following combinations of lens control and background pattern:



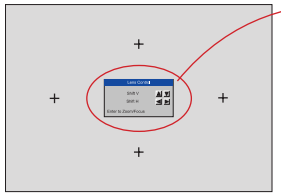
Shift with no pattern



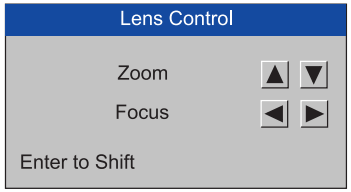
Zoom/Focus with grid and crosses

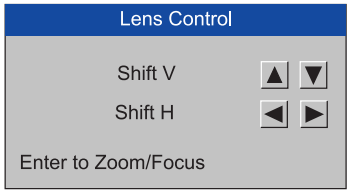


Shift with grid



Zoom/Focus with crosses





- Use ◁, ▷, △ and ▽ to **Shift** the lens or to adjust the **Zoom** and **Focus**, as applicable

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

ALIGNMENT menu *continued*

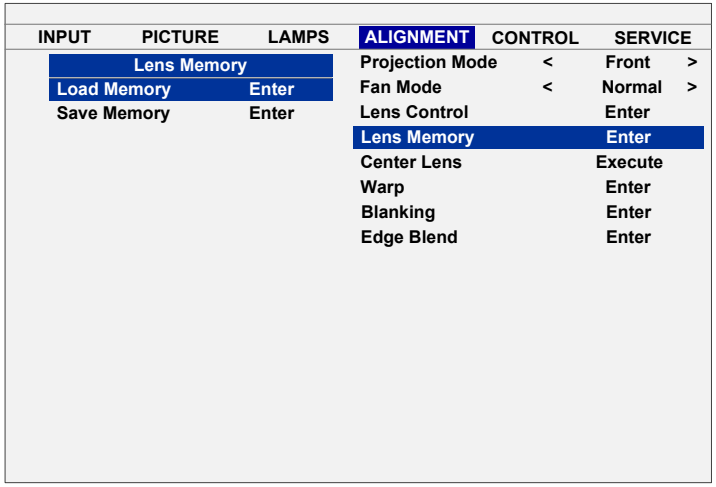
Lens Memory submenu

The current lens position, focus and zoom settings can be saved in one of ten memories, for later recall.

- Press **ENTER** to open the Lens Memory submenu.

Save Memory

- Press **ENTER** to open the Save Memory submenu.
- Use △ and ▽ to select from **Lens Memory 1** to **Lens Memory 10**.



- Press **ENTER** to save the current settings.

Load Memory

- Press **ENTER** to open the Load Memory submenu.
- Use △ and ▽ to select from **Lens Memory 1** to **Lens Memory 10**.
- Press **ENTER** to recall the saved settings.

Center Lens

- Press **ENTER** to **Center** the **Lens**.

Notes

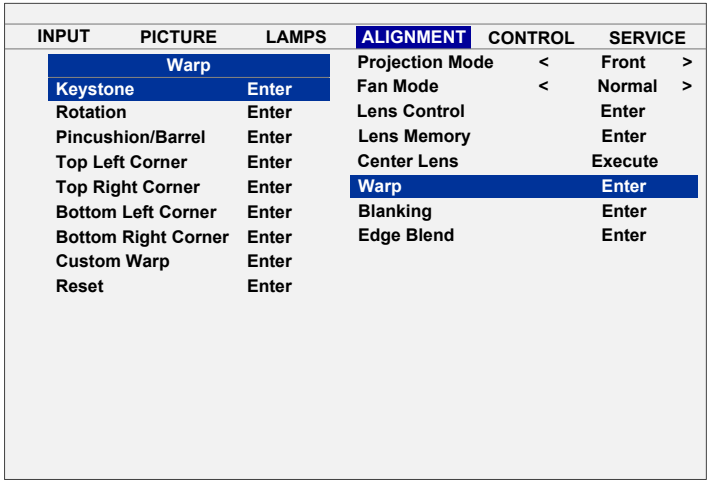
*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

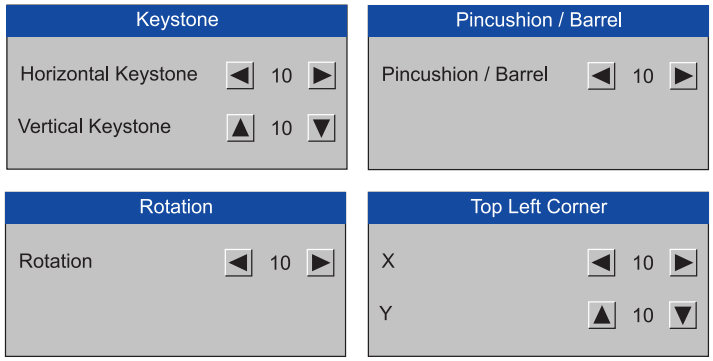
*The **Center Lens** command must be used after a new lens is inserted.*

ALIGNMENT menu *continued*

Warp submenu

- Press **ENTER** to open the Warp submenu.





Warp control boxes

Keystone, Rotation, Pincushion/Barrel, Corner

- Use △ and ▽ to select one of the warp controls.
- Press **ENTER** to open the warp control box:
  - Use the **Keystone** control to correct for any distortion caused by the projector being in a different horizontal or vertical plane to the screen..
  - Use the **Rotation** control to rotate the image up to 5° clockwise or anti-clockwise.
  - Use the **Pincushion/Barrel** control to correct for any distortion caused by the screen being concave or convex.
  - Use the four **Corner** controls to stretch the image from each of the four corners..
  - Use **Custom Warp** to activate a user-defined warp pattern.

Reset

- Press **ENTER** to reset all warp settings to zero.

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

Only one of the Warp controls, or the Blanking control can be used at any one time.

Exception: all four Corner controls can be used at the same time.

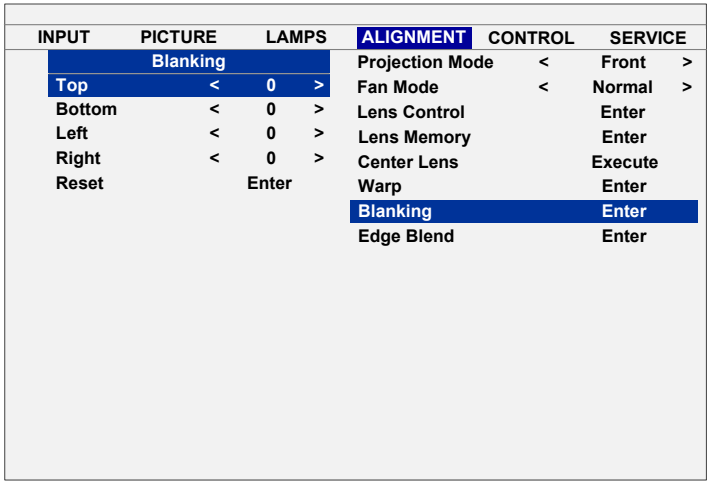
If the Edge Blend feature is in use, then only the four Corner controls can be used.

*If you are not sure which Warp control is in use, then select **Reset**, from the **Warp** menu to reset all controls to zero.*

ALIGNMENT menu *continued*

Blanking submenu

- Press **ENTER** to open the Blanking submenu.



Top, Bottom, Left and Right

- Set each slider as required.

Reset

- Press **ENTER** to reset all blanking settings to zero.

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

Only one of the Warp controls, or the Blanking control can be used at any one time.

Exception: all four Corner controls can be used at the same time.

If the Edge Blend feature is in use, then only the four Corner controls can be used.

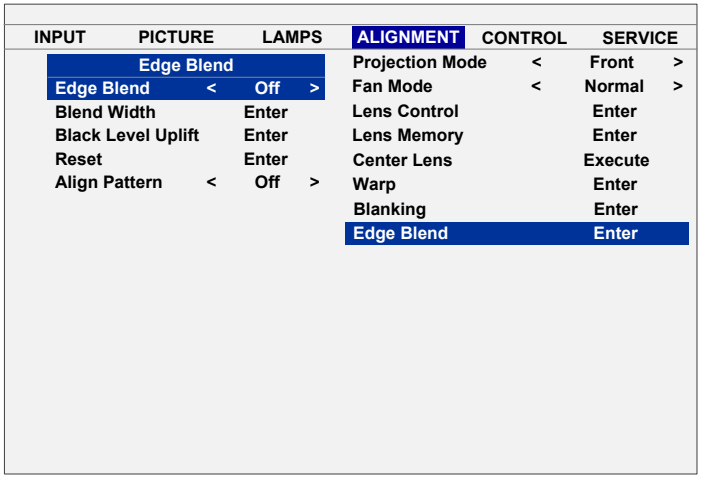
*If you are not sure which Warp control is in use, then select **Reset**, from the **Warp** menu to reset all controls to zero.*

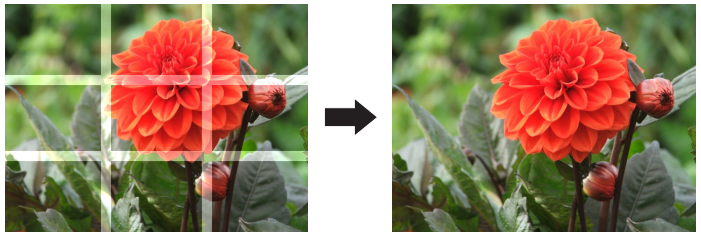
ALIGNMENT menu *continued*

Edge Blend submenu

When several projectors are used to create a large tiled image, the edges need to be blended to avoid the overlaps appearing brighter than the rest of the image..

- Press **ENTER** to open the Edge Blend submenu.





Blend width

Edge Blend

- Set this to **Off** or **On** as required.

Blend Width

- Press **ENTER** to open the Blend Width submenu.
- Set the **Width** sliders to the blend width required for each edge to be blended.

Black Level Uplift

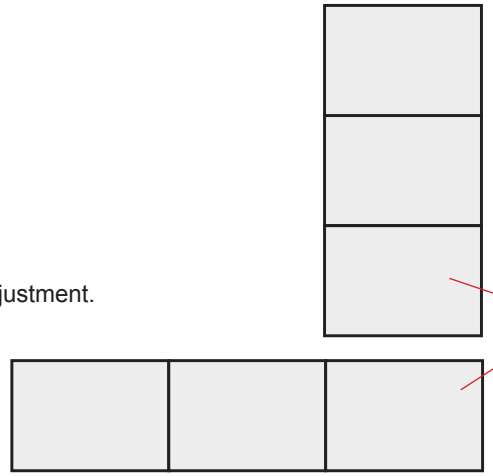
- Press **ENTER** to open the Black Level Uplift submenu.
- Set the **Area** sliders to correct for stray light from the DMD's non-addressable border.
- Set the **All** sliders for the amount of uplift required; the **Color** sliders can be used for fine adjustment.

Reset

- Press **ENTER** to reset all edge blend settings to zero.

Align Pattern

- Set this to **Off** or **On** as required.



Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

Only one of the Warp controls, or the Blanking control can be used at any one time.

Exception: all four Corner controls can be used at the same time.

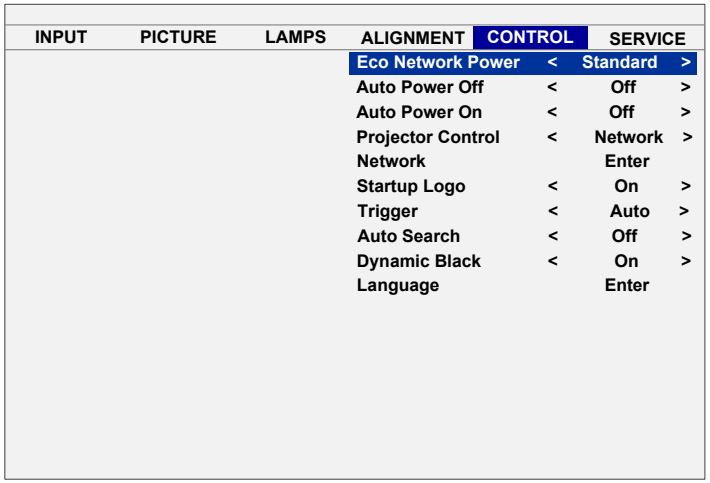
If the Edge Blend feature is in use, then only the four Corner controls can be used.

Black Level Uplift is available for up to two edges only, and they must be top+bottom, or left+right – not top+left for example.

Therefore, uplift can only be used for an array of projectors either:

1 projector high or
1 projector wide

CONTROL menu



Eco Network Power

- Set this to **Standard** or **Eco** as required. In Eco mode, the LAN power supply is switched off.

Auto Power Off

- Set this to **On**, if you want the projector to go into **Standby mode** when no input source is detected for 20 minutes.

Auto Power On

- Set this to **On**, if you want the projector to start up immediately when the mains is connected.
- Set this to **Off**, if you want the projector to go into **Standby mode** when the mains is connected. In this case, the projector will not start up until the **POWER** button is pressed on the control panel or the remote control.

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

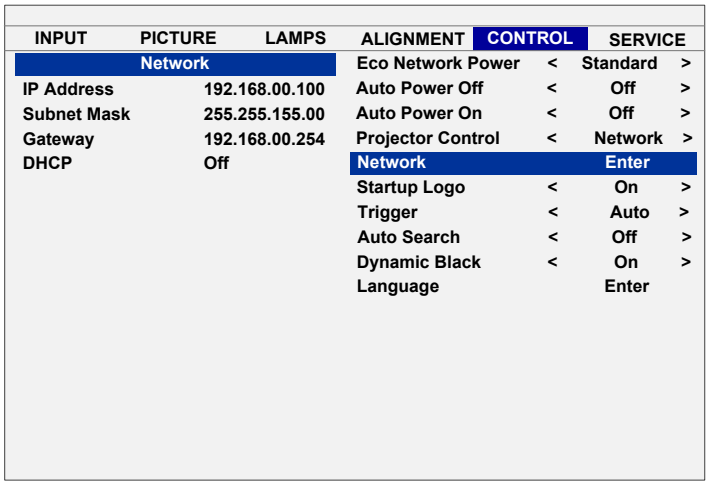
Eco Network Power *must be set to* **Standard**, *if you wish to control the projector via the LAN connection.*

CONTROL menu *continued*

Projector Control

- Set this to **Network** or **RS232** as required.

Network submenu



- Press **ENTER** to open the Network submenu.

  The settings here are for information only.

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

Eco Network Power *must be set to* **Standard**, *if you wish to control the projector via the LAN connection.*

*To change any of the network settings, use the embedded **LAN IP Configuration Utility** (see the **Remote Communications Guide**).*

CONTROL menu *continued*

Startup Logo

- Set this to **On** if you want the DP logo to show when the projector is first switched on.

Trigger

- Set this to **Auto** if you want the **Trigger** output to be activated when the projector is first switched on.
- Set this to one of the **Aspect Ratio** settings, if you want the **Trigger** output to be activated when the projector is switched to that aspect ratio.

Auto Search

- When this is set to **On**, the projector will search for an alternative input source when the current input source is disconnected
- When this is set to **Off**, the projector will show the DP logo when the current input source is disconnected.

Dynamic Black

- Set this to **On** or **Off** as required.

Language

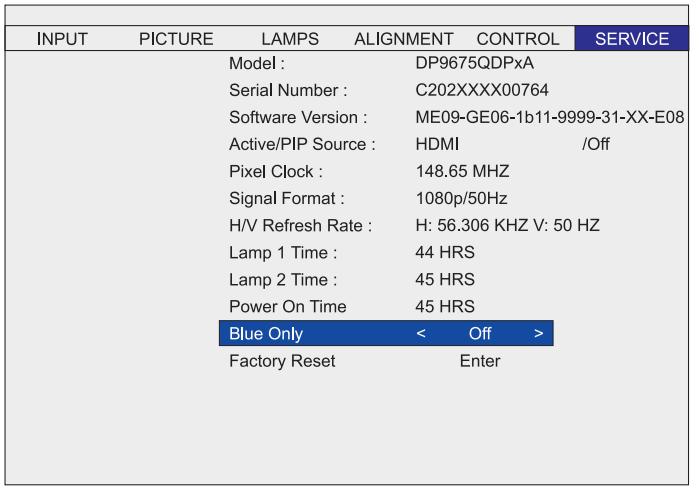
- Press **ENTER** to open the Language Selection menu, then select an language from the list.

Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

Dynamic Black reduces the overall light output for images that contain a lot of black. This improves the perceived contrast ratio.

SERVICE menu



Information

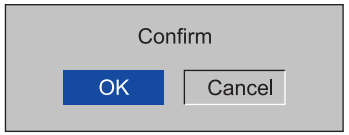
- The first part of the menu is for information only.

Blue Only

- Set this to **On** or **Off** as required.

Factory Reset

- Projector will ask for confirmation before restoring all settings to factory defaults.
- When the confirmation box appears, use ◁ or ▷ to move the blue highlight to **OK** or **Cancel**, then press **ENTER** to confirm your selection.



Notes

*See also **Using the Menus**, earlier in this guide and **Menu Map**, later in this guide.*

Do NOT do this unless you are sure that you want to restore ALL settings to their factory defaults.

Menu Map

Menu	*Submenus and Controls*
INPUT	
	Input Selection *HDMI, DVI, VGA, Component/BNC, Composite, S-Video, 3G-SDI, Option Board*
	PIP
	PIP Option *Off, On*
	PIP Input *Select from group B or group A*
	Position *Top Left, Top Right, Bottom Left, Bottom Right, Split L-R*
	Test Pattern *Off, Color Bars, Alignment Grid, Burst, Red, Green, Blue, White, Black, Cross Mark, Cross Hatch + Mark, Corrected Red, Corrected Green, Corrected Blue, Horizontal Ramp*
	Color Space *Auto, YCbCr, YPbPr, RGB-PC, RGB-Video*
	Input Lock *Auto, 48Hz, 50Hz, 60Hz*
	Background *Logo, Blue, Black, White*
	Video Standard *Auto, PAL, SECAM, NTSC*
	Auto Sync Adjust *Always, Off, Auto*
PICTURE	
	Display Mode *Video, High Bright, Presentation*
	Contrast
	Adaptive Contrast *Off, On*
	Brightness
	Saturation
	Hue
	Gamma *Video, Linear, Film, Graphics*
	Color
	Color Temperature *Native, 5000K, 6500K, 7800K, 9300K*
	Trim *RGB Lift and Gain*
	Sharpness
	Noise Reduction
	Aspect Ratio *5:4, 4:3, 16:10, 16:9, 1.88, 2.35, Letterbox, Native, Unscaled*
	Overscan *Off, Crop, Zoom*
	VGA Setup *H Total, H Start, H Phase, V Start*
	Auto Sync *Press* **ENTER** *to execute*

Notes

Some of the information in this menu map is summarised. See the actual menu on the projector for full detail.

Some menu options and controls may not be available due to settings in other menus. These will be shaded grey on the actual menu.

Where it would be helpful, some menu options are described in more detail earlier in this operating guide.

Color Temperature *values depend on other settings.*

Menu	*Submenus and Controls*
LAMPS	
	Mode *Dual, Single*
	Power *Normal, Custom Power, Eco*
	High Altitude *Off, On*
	Custom Power Level *80-100%*
	Lamp Status *Information Only: Lamp 1 On, Off Lamp 2 On, Off*
ALIGNMENT	
	Projection Mode *Front, Rear, Ceiling + Front, Ceiling + Rear*
	Fan Mode *Normal, Up, Down*
	Lens Control *Shift, Zoom/Focus*
	Lens Memory
	Load Memory *Memory 1-10*
	Save Memory *Memory 1-10*
	Center Lens *Press* **ENTER** *to execute*
	Warp
	Keystone *Horizontal, Vertical*
	Rotation
	Pincushion/Barrel
	Top Left Corner, Top Right, Bottom Left, Bottom Right
	Custom Warp
	Reset (all warp settings) *Press* **ENTER** *to execute*
	Blanking *Top, Bottom, Left, Right, Reset (all blanking settings)*
	Edge Blend
	Edge Blend *Off, On*
	Blend Width *Top, Bottom, Left, Right*
	Black Level Uplift
	Select Area *Top, Bottom, Left, Right*
	Adjust Width *All, Red, Green, Blue*
	Reset (all edge blend settings) *Press* **ENTER** *to execute*
	Align Pattern *Off, On*

Notes

Some of the information in this menu map is summarised. See the actual menu on the projector for full detail.

Some menu options and controls may not be available due to settings in other menus. These will be shaded grey on the actual menu.

Where it would be helpful, some menu options are described in more detail earlier in this operating guide.

Menu	*Submenus and Controls*
CONTROL	
	Eco Network Power *Standard, Eco*
	Auto Power Off *On, Off*
	Auto Power On *On, Off*
	Projector Control *RS232, Network*
	Network *Information only: IP Address, Subnet Mask, Gateway, DHCP*
	Startup Logo *On, Off*
	Trigger *Auto, 5:4, 4:3, 16:10, 16:9, 1.88, 2.35, Letterbox, Native, Unscaled*
	Auto Search *On, Off*
	Dynamic Black *On, Off*
	Language *Select from list*
SERVICE	
	Information only: *Model, Serial Number, Software Version, Active/PIP Source, Pixel Clock, Signal Format, H/V Refresh Rate, Lamp Time, Power On Time,*
	Blue Only *Off, On*
	Factory Reset *Press* **ENTER** *to execute.*

Notes

Some of the information in this menu map is summarised. See the actual menu on the projector for full detail.

Some menu options and controls may not be available due to settings in other menus. These will be shaded grey on the actual menu.

Where it would be helpful, some menu options are described in more detail earlier in this operating guide.

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DIGITAL PROJECTION

REMOTE COMMUNICATIONS GUIDE

E-Vision 8000 Series

High Brightness Digital Video Projector

Rev F July 2014

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Introduction

The projector can be controlled by using an external control system or a PC via a LAN or RS232 serial interface, using a terminal-emulation program, such as HyperTerminal.

Operation commands

Operation commands simulate menu operations and determine the settings of the projector, and use the following format:

- All commands consist of ASCII text strings starting with the letters 'op', and ending with an ASCII Carriage Return character:

  op <operation> <command> [CR]

- The <command> string can take one of the following formats:

	<command>	**Description**
Set	= <value>	Makes the setting take that value.
Get	?	Asks what the current value is. The value is returned as an ASCII text string.
Increment	+	Adds 1 to the current value.
Decrement	–	Subtracts 1 from the current value.
Execute	(none)	Performs an action.

Examples

op input.sel = 1 [CR]	sets the input signal to DVI
op input.sel ? [CR]	asks what is the input signal
op brightness + [CR]	increments the brightness setting
op contrast – [CR]	decrements the contrast setting
op auto.img [CR]	commands the projector to attempt to re-synchronise to the current input source

Key commands

Key commands duplicate remote control key presses and use the following format:

ky <operation>[CR]

Examples

ky testpattern[CR]	brings up the list of available test patterns (identical to pressing the TEST PATTERN key on the remote)
ky input[CR]	brings up the list of available input sources (identical to pressing the INPUT key on the remote)
ky power.off[CR]	switches the projector off (identical to pressing the POWER OFF key on the remote)

Notes

*Details of how to connect to the projector, using the serial control or LAN inputs, can be found in the **Connections Guide**.*

Spaces in the commands are necessary.

eg *op input.sel = 1*
NOT *opinput.sel=1*

The TCP Port number is 7000.

*The **Serial Port** settings are:*

- *Baud rate - 38,400 bps*
- *Data length - 8 bits*
- *Stop bits - one*
- *Parity - none*
- *Flow control - none*

The Operation Commands

<operation>	<command>	<values>	Notes
INPUT menu			
input.sel	= ?	0 = HDMI 1 = DVI 2 = VGA 3 = Component / BNC 4 = Composite 5 = S-Video 6 = 3G-SDI	Not applicable when **Picture Mute** is **On**.
pip	= ?	0 = Off 1 = On	
pip.sel	= ?	1 = HDMI 2 = DVI 3 = VGA 4 = Component / BNC 5 = Composite 6 = S-Video 7 = 3G-SDI	Cannot be set to 0.
pip.swap	(execute)	Swap main and PIP source	Not applicable without signal locked.
pip.pos	= ?	0 = Top left 1 = Top right 2 = Bottom left 3 = Bottom right 4 = Split L-R	Not applicable when **PIP** is **Off**.

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Notes

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<operation>	<command>	<values>	Notes
pattern	= ?	0 = Color Bar 1 = Cross Hatch 2 = Burst 3 = Red 4 = Green 5 = Blue 6 = White 7 = Black 8 = Cross Mark 9 = Cross Hatch + Mark 10 = Red (TI) 11 = Green (TI) 12 = Blue (TI) 13 = HRamp (TI) 14 = Off	
color.space	= ?	0 = Auto 1 = YCbCr 2 = YPbPr 3 = RGB-PC (0-255) 4 = RGB-Video (16-235)	Not applicable without signal locked.
input.lock	= ?	0 = Auto 1 = 48 Hz 2 = 50 Hz 3 = 60 Hz	Not applicable without signal locked.
no.signal	= ?	0 = Logo 1 = Blue 2 = Black 3 = White	
vid.std	= ?	0 = Auto 1 = PAL 2 = SECAM 3 = NTSC	Not applicable without signal locked. Only valid when the input is **Composite** or **S-Video**.
auto.imgadj	= ?	0 = Off 1 = Auto 2 = Always	Not applicable without signal locked.

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Notes

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<operation>	<command>	<values>	Notes
PICTURE menu			
pic.mode	= ?	0 = High Bright 1 = Presentation 2 = Video	
contrast	= ? + -	0 ~ 200	Not applicable without signal locked.
dyna.cont	= ?	0 = Off 1 = On	Not applicable without signal locked.
bright	= ? + -	0 ~ 200	Not applicable without signal locked.
saturat	= ? + -	0 ~ 200	Not applicable without signal locked. Only valid when the input is **Composite** or **S-Video**.
tint	= ? + -	0 ~ 200	***Hue*** Not applicable without signal locked. Only valid when the input is **Composite** or **S-Video**.
gamma	= ?	0 = Film 1 = Graphics 2 = Video 3 = Linear	Not applicable without signal locked.
color.temp (pic.mode is "High Bright")	?	5 = Native	Not applicable without signal locked. Not applicable when **Color Space** is set to **Custom**. Not applicable when edge blending is on.
color.temp (pic.mode is "Presentation")	= ?	2 = 6500K 5 = Native	Not applicable without signal locked. Not applicable when **Color Space** is set to **Custom**. Not applicable when edge blending is on.
color.temp (pic.mode is "Video")	= ?	0 = 5000K 2 = 6500K 3 = 7800K 4 = 9300K 5 = Native	Not applicable without signal locked. Not applicable when **Color Space** is set to **Custom**. Not applicable when edge blending is on.
red.offset	= ? + -	0 ~ 200	Not applicable without signal locked.
green.offset	= ? + -	0 ~ 200	Not applicable without signal locked.

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Notes

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<operation>	<command>	<values>	Notes
blue.offset	= ? + -	0 ~ 200	Not applicable without signal locked.
red.gain	= ? + -	0 ~ 200	Not applicable without signal locked.
green.gain	= ? + -	0 ~ 200	Not applicable without signal locked.
blue.gain	= ? + -	0 ~ 200	Not applicable without signal locked.
sharpness	= ? + -	0 ~ 200	Not applicable without signal locked.
nr	= ? + -	0 ~ 200	***Noise Reduction*** Not applicable without signal locked.
aspect	= ?	0 = 5:4 1 = 4:3 2 = 16:10 3 = 16:9 4 = 1.88 5 = 2.35 6 = Letterbox 7 = Native 8 = Unscaled	Not applicable without signal locked. **Native** aspect ratio is not applicable when zoom is set to **Zoom**.
zoom	= ?	0 = Off 1 = Crop 2 = Zoom	***Overscan*** Not applicable without signal locked. **Zoom** is not applicable when aspect ratio is set to **Native**.
h.total	= ? + -	0 ~ 200	Not applicable without signal locked. Only applicable when the source is either **VGA** or **Component**.
h.pos	= ? + -	0 ~ 200	Not applicable without signal locked.
h.phase	= ? + -	0 ~ 200	Not applicable without signal locked. Only applicable when the source is either **VGA** or **Component**.
v.pos	= ? + -	0 ~ 200	Not applicable without signal locked.
auto.img	(execute)		***Auto Sync*** Not applicable without signal locked.

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Notes

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<operation>	<command>	<values>	Notes
LAMPS menu			
lamps	= ?	0 = Single 1 = Dual	Not applicable when lamp is cooling.
lamp.mode	= ?	0 = Economy 1 = Standard 2 = Dimming	***Drive*** Not applicable without signal locked.
lamp.pwr	= ?	0 ~ 25 (80.4 % ~ 100.0 %)	Not applicable without signal locked.
altitude	= ?	0 = Off 1 = On	***High Altitude***
lamp1.stat	?	0 = Off 1 = On	
lamp2.stat	?	0 = Off 1 = On	
ALIGNMENT menu			
proj.mode	= ?	0 = Front 1 = Rear 2 = Ceiling + Front 3 = Ceiling + Rear	
fan.pos	= ?	0 = Normal 1 = Vertical 2 = Down	
zoomio	+ -	+ = Zoom out - = Zoom in	
focus	+ -	+ = Focus Near - = Focus Far	
vert.offset	+ -	+ = Up - = Down	***Vertical Lens Shift***
horiz.offset	+ -	+ = Right - = Left	***Horizontal Lens Shift***
lens.load	=	1 ~ 10	***Lens Memory Load***
lens.save	=	1 ~ 10	***Lens Memory Save***
lens.center	(execute)		

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Notes

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<operation>	<command>	<values>	Notes
h.keystone	= ? + -	-350 ~ +350	The sum of the absolute values of h.keystone and v.keystone cannot be greater than 350.
v.keystone	= ? + -	-200 ~ +200	The sum of the absolute values of h.keystone and v.keystone cannot be greater than 350.
warp.rotat	= ? + -	-20 ~ +20	Each unit is ¼°.
warp.pinbrl	= ? + -	-100 ~ +100	***Pincushion/Barrel***
warp.tlc.x warp.tlc.y	= ? + -	x: -192 ~ +192 y: -120 ~ +120	***Top Left Corner***
warp.trc.x warp.trc.y	= ? + -	x: -192 ~ +192 y: -120 ~ +120	***Top Right Corner***
warp.blc.x warp.blc.y	= ? + -	x: -192 ~ +192 y: -120 ~ +120	***Bottom Left Corner***
warp.brc.x warp.brc.y	= ? + -	x: -192 ~ +192 y: -120 ~ +120	***Bottom Right Corner***
warp.reset	(execute)		
blank.top	= ? + -	0 ~ 360	
blank.btm	= ? + -	0 ~ 360	
blank.left	= ? + -	0 ~ 534	
blank.right	= ? + -	0 ~ 534	
blank.rst	(execute)		
eb.stat	= ?	0 = Off 1 = On	***Edge Blend***
eb.wht.top	= ? + -	0, 200 ~ 500	***Blend Width Top*** 1-199 not allowed
eb.wht.btm	= ? + -	0, 200 ~ 500	***Blend Width Bottom*** 1-199 not allowed
eb.wht.left	= ? + -	0, 200 ~ 800	***Blend Width Left*** 1-199 not allowed
eb.wht.right	= ? + -	0, 200 ~ 800	***Blend Width Right*** 1-199 not allowed
eb.blk.top	= ? + -	0, 8, 16, 24, 32	***Black Level Uplift Area Top***

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Notes

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<operation>	<command>	<values>	Notes
eb.blk.btm	= ? + -	0, 8, 16, 24, 32	***Black Level Uplift Area Bottom***
eb.blk.left	= ? + -	0, 4, 8, 12, 16, 20, 24, 28, 32	***Black Level Uplift Area Left***
eb.blk.right	= ? + -	0, 4, 8, 12, 16, 20, 24, 28, 32	***Black Level Uplift Area Right***
eb.all	= ? + -	0 ~ 32	***Black Level Uplift Adjust Width All***
eb.red	= ? + -	0 ~ 32	***Black Level Uplift Adjust Width Red***
eb.green	= ? + -	0 ~ 32	***Black Level Uplift Adjust Width Green***
eb.blue	= ? + -	0 ~ 32	***Black Level Uplift Adjust Width Blue***
eb.reset	(execute)		
eb.adl	= ?	0 = Off 1 = On	***Align Pattern***
CONTROL menu			
eco.net.pow	= ?	0 = Off (ECO Standby Mode) 1 = On (Standard Standby Mode)	***Eco Network Power***
auto.powoff	= ?	0 = Off 1 = On	
auto.powon	= ?	0 = Off 1 = On	
proj.ctrl	= ?	0 = RS232 1 = network	Not applicable when **Eco Network Power** is on.
net.ipaddr	= ?	<string>	
net.subnet	= ?	<string>	
net.gateway	= ?	<string>	
net.dhcp	= ?	0 = Off 1 = On	
startup.logo	= ?	0 = Off 1 = On	

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Notes

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<operation>	<command>	<values>	Notes
trig.1	= ?	0 = 5:4 1 = 4:3 2 = 16:10 3 = 16:9 4 = 1.88 5 = 2.35 6 = Letterbox 7 = Native 8 = Unscaled 9 = Auto	If trig.1 is set to **Auto**, the projector will start sending the trigger as soon as it is switched on. Otherwise the trigger will be sent only when the aspect ratio matches this setting.
auto.src	= ?	0 = Off 1 = On	***Auto Search***
dblack	= ?	0 = Off 1 = On	***Dynamic Black***
lang	= ?	0 = English 1 = French 2 = Spanish 3 = German 4 = Portuguese 5 = Chinese Simplified 6 = Chinese Traditional 7 = Japanese 8 = Korean	
SERVICE menu			
model	?	<string>	
ser.no	?	<string>	
sw.ver	?	<string>	
act.src	?	0 = HDMI 1 = DVI 2 = VGA 3 = Component / BNC 4 = Composite 5 = S-Video 6 = 3G-SDI	***Active Source***

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Notes

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<operation>	<command>	<values>	Notes
pip.src	?	0 = HDMI 1 = DVI 2 = VGA 3 = Component / BNC 4 = Composite 5 = S-Video 6 = 3G-SDI	***PIP Source***
pixel.clock	?	<string>	In MHz Not applicable without signal locked.
signal	?	<string>	Not applicable without signal locked.
h.refresh	?	<string>	Not applicable without signal locked.
v.refresh	?	<string>	Not applicable without signal locked.
lamp1.hours	?	<string>	
lamp2.hours	?	<string>	
proj.runtime	?	<string>	
blue.only	= ?	0 = Off 1 = On	
fact.reset	(execute)		Factory reset
Miscellaneous commands			
power.on	(execute)		Power on
power.off	(execute)		Power off (puts projector into **Standby** mode)
picture.mute	= ?	0 = Off 1 = On	
status	?	0 = standby 1 = warm up 2 = imaging 3 = cooling 4 = warning	
remote.set	= ?	1 ~ 10: Set Projector ID 255: Clear Projector ID (No ID)	

Notes

The Key Commands

<operation>	Corresponding remote control key
power.on	POWER ON
power.off	POWER OFF
menu	MENU
exit	EXIT
input	INPUT
picture	PICTURE
network	NETWORK
autosync	AUTO SYNC
aspect	ASPECT
pip	PIP
overscan	OVERSCAN
freeze	FREEZE
lampmode	LAMP MODE
info	INFO
shutter	SHUTTER
idset	ID SET
lensshift	LENS SHIFT
testpattern	TEST PATTERN
enter	ENTER
up	UP
down	DOWN
left	LEFT
right	RIGHT

Notes

An input command will return "NA" when the input command is not applicable in some specific conditions.

Web Configuration Utility

The ***LAN IP Address*** of the projector can be set remotely using the **Web Configuration Utility**.

- Make sure the projector is connected to a remote computer via LAN.
- From the remote computer, access the default LAN IP address of the projector. The Web Configuration Utility opens.

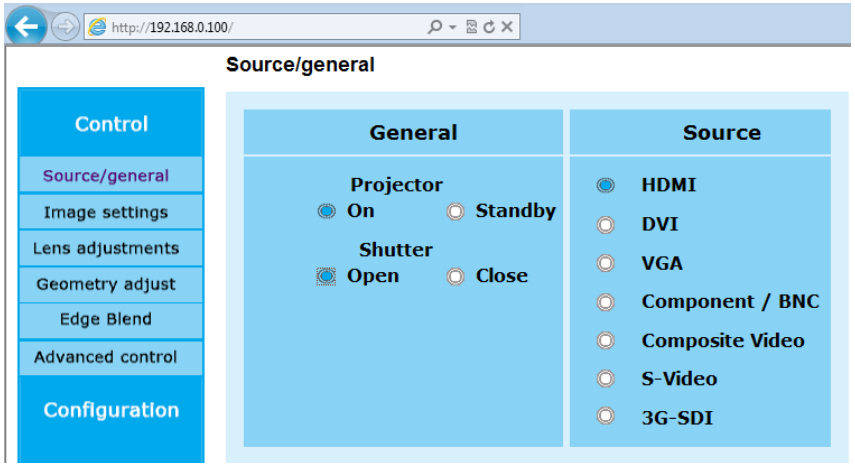
It is possible to control many of the projector's settings using the embedded Web Configuration Utility. The following pages contain a few examples of such settings.

Examples

Navigate to the **Control** tab and edit the settings as required.

The **Source/general** page enables you to:

- switch the projector on and off
- open and close the shutter
- select an input source



Notes

Eco Network Power *must be set to* **Standard**, *if you wish to control the projector via the LAN connection.*

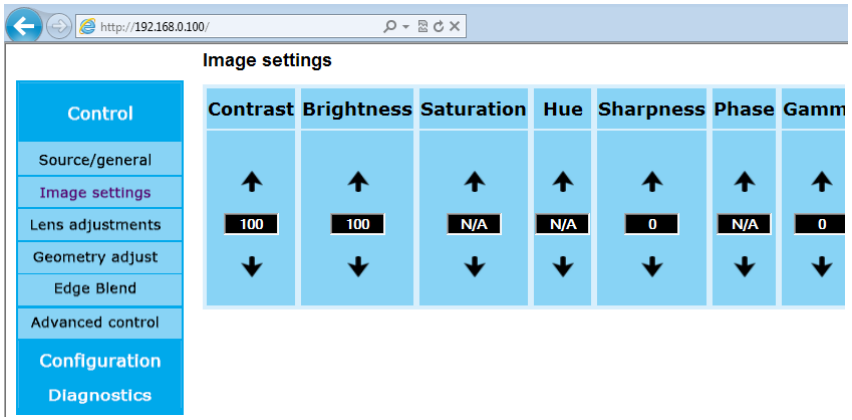
The default LAN IP address is 192.168.0.100

If you suspect this has been changed, then you can view the current **Network** *settings in the* **Control Menu**.

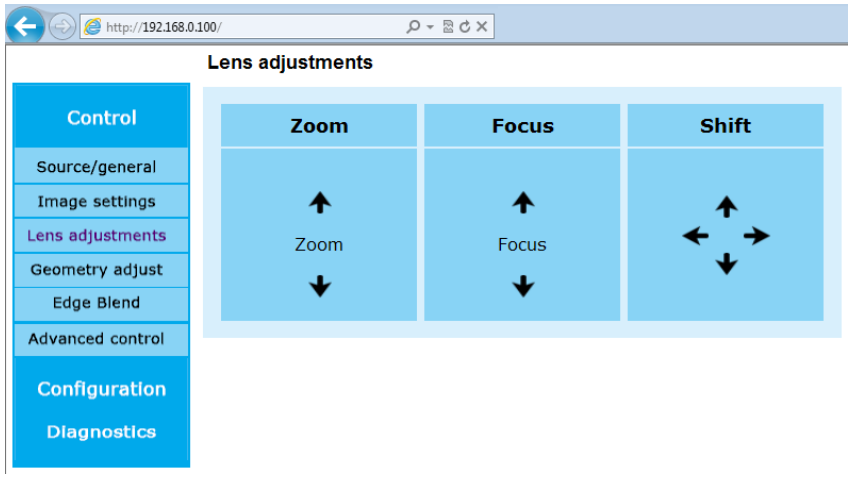
For more information about connecting the projector via LAN, see the ***Connection Guide***.

Examples - continued from previous page

The **Image settings** page allows access to settings from the **Picture** menu.



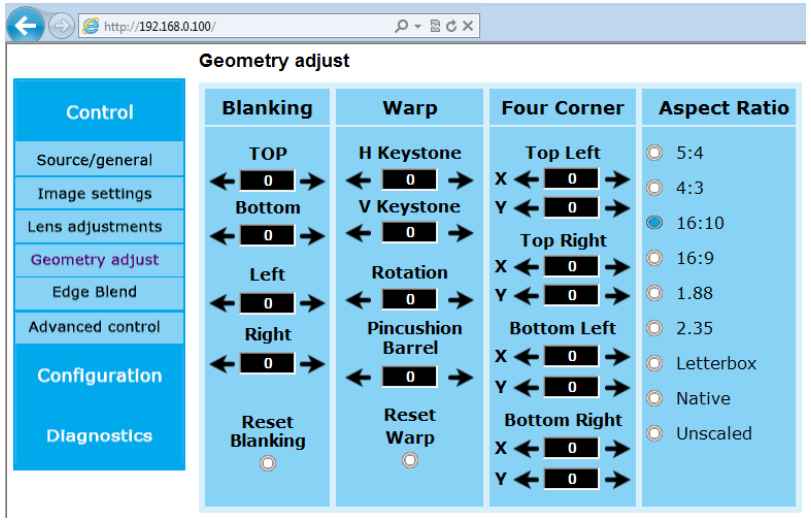
The **Lens adjustments** page allows access to lens control settings.

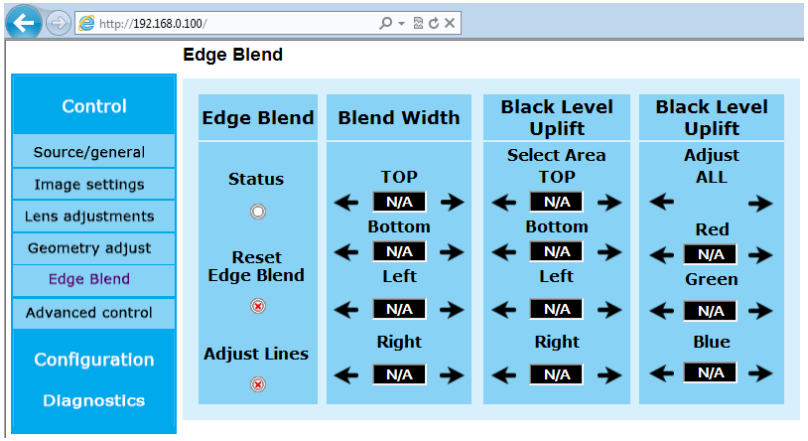


Notes

Examples - continued from previous page

The **Geometry adjust** and **Edge Blend** pages allow access to settings from the **Alignment** menu.

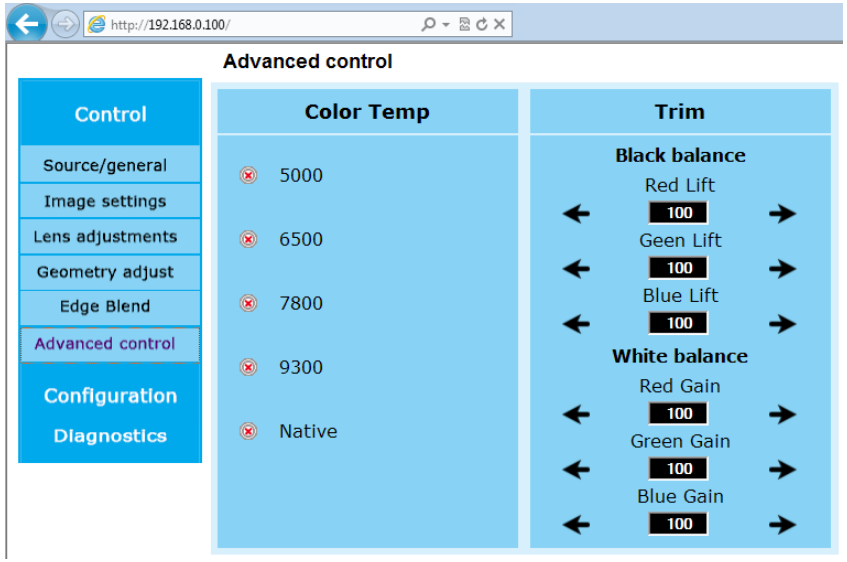




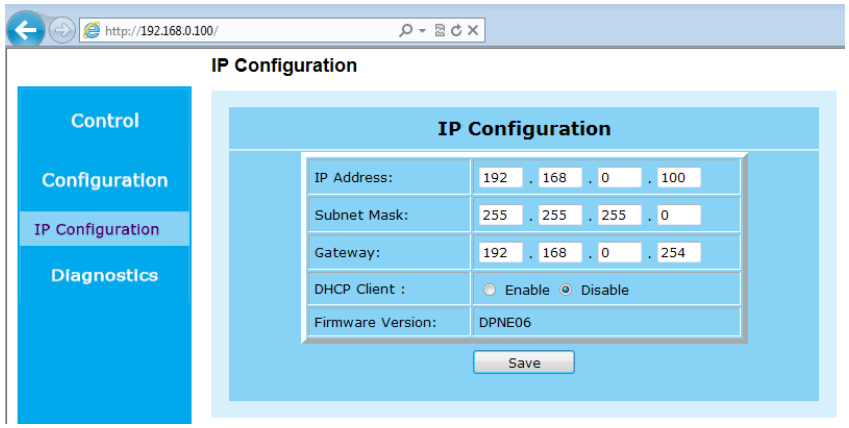
Notes

Examples - continued from previous page

The **Advanced control** page allows access to settings from the **Picture** menu, **Color** sub-menu.



To view and edit your network settings, navigate to the **Configuration** tab.



Notes